

BATTLESHIPS IN ACTION

H. W. WILSON

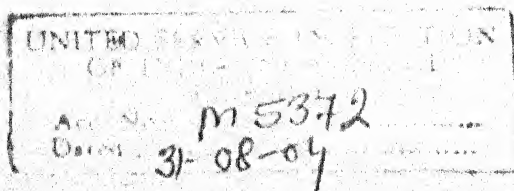
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battle-plans, and diagrams.*

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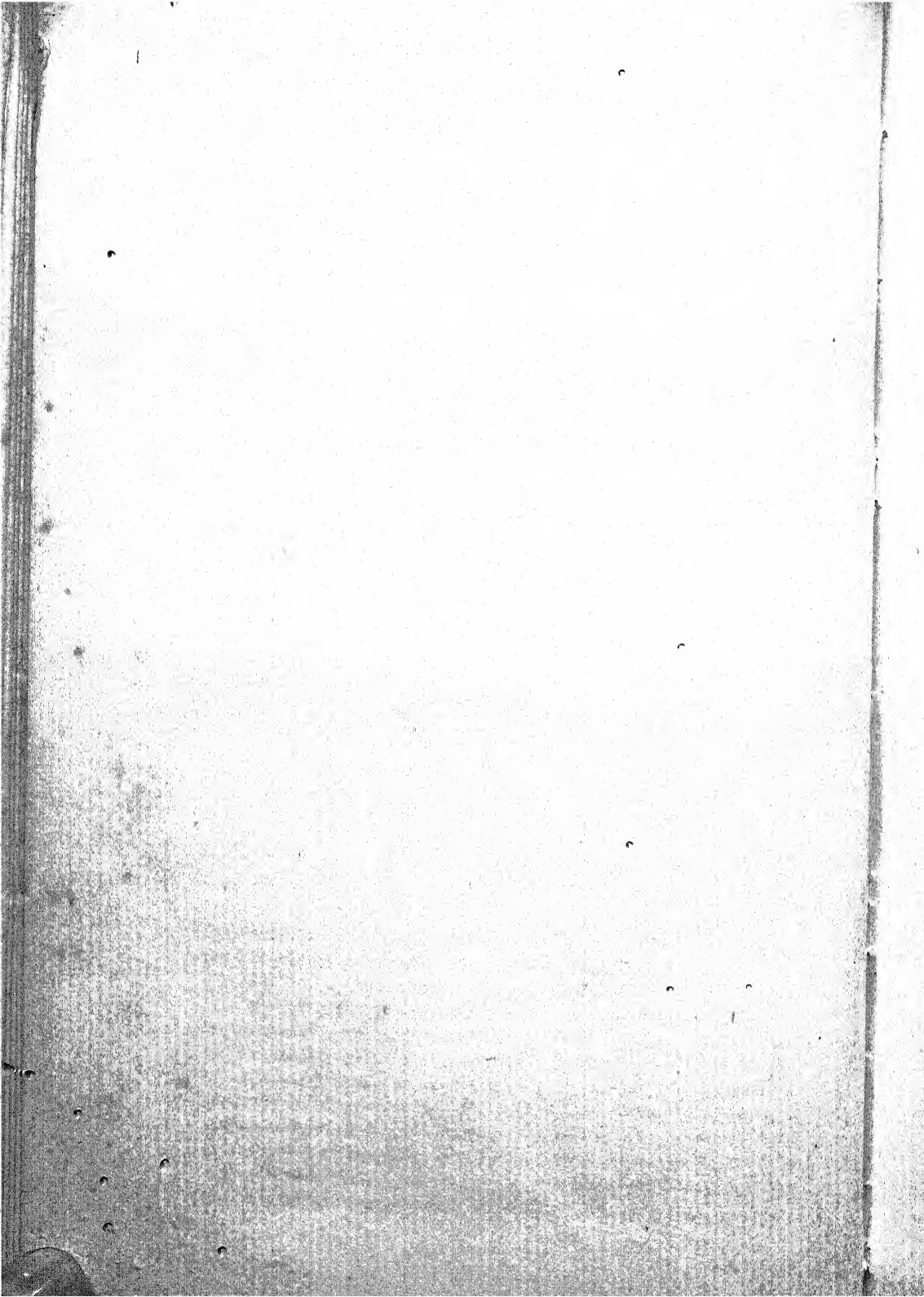
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BATTLESHIPS IN ACTION

VOLUME TWO

CHAPTER XVII

New Factors in the Great War—The Submarine—Powers Engaged—Strength of the Fleets—Dreadnought Type—British and German Gunnery—Rapidity of Fire—British Armour—Defects of British Shells—British Torpedo—Personnel—Plans of Campaign—British Bases—Plan 17—Its Naval Danger—German Fleet Warned—Energy of British Admiralty—The Grand Fleet—The War Leaders—First Submarine Sunk—"Königin" Luise Sunk—"Amphion" Sunk—German Mine-fields in Open Waters—The British Army Crosses to France.

THE naval war of 1914-18 differed from all previous wars in one all-important respect. It was fought in space of three dimensions—in the air, on the surface of the sea, and underneath the water. For the first time aircraft and submarines were employed on a large scale. Aircraft had been used in the wars of 1911-12 and 1912-13 for reconnaissance on land, but at sea, with the single exception of Mutusis's seaplane raid over the Dardanelles in February, 1913, they had not been engaged. So with submarines; both the Italian and the Greek Navies possessed them, but had not had any opportunity of attacking with them. That they would profoundly influence naval war was certain, but

what the exact character of their influence would be was still obscure.

Manœuvres and peace tests carried out by the various navies had left much doubt as to the submarine's capacity to make long voyages and keep the sea for any period beyond forty-eight hours. No navy had devised effective methods of attacking and destroying underwater craft; and all commanders of surface squadrons were, therefore, subjected to peculiar anxiety when in the presence or within easy range of these insidious assailants. As for aircraft, they had not in 1914 become an integral part of a battle fleet, though a special vessel for aircraft carrying was building for the British Navy, and the old cruiser *Hermes*, fitted for the conveyance of seaplanes, took part in the manœuvres of 1913.

The war at the outset was fought between the British, French, and Russian Navies (called the Allies) on the one side, and the German and Austrian Navies (called the Central Powers) on the other. The entrance of Turkey into the war on the German side in October, 1914, was followed by the entrance of Italy on the Allied side in May, 1915; and, after a long interval, by the entrance of the United States on the Allied side in April, 1917. Japan in the Far East co-operated with the Allies from August 23, 1914, and later in the war gave a considerable amount of assistance in the Mediterranean, besides patrolling the eastern oceans. Various minor Powers, among them Greece and Portugal, also joined the Allies at various dates, but beyond placing fresh bases at the disposal of the Allied Navies they had little share in the operations at sea.

The part which geography played in the conflict cannot be exaggerated. Geographical conditions isolated the fleets which Russia maintained in the Baltic and Black Sea and prevented them from joining hands with the British and French. The difficulties of access to these seas were such that the Allies could not send reinforcements or supplies to the Russians in them. The German-Turkish blockade of Russia, which the Allies entirely failed to break, was one of the important causes of the Russian collapse. The advantage which Germany and Turkey enjoyed against Russia in virtue of geography, England enjoyed against Germany. The British Islands lay like a barrier across the sea communications of the German Empire,¹ and by holding the

¹ Cf. Reventlow, *Der Einfluss der Seemacht*, p. 42.

three passages, that twenty miles wide through the Straits of Dover; that forty miles wide between the Shetlands and Orkneys; and that somewhat less than 200 miles wide between the Shetlands and Norway, the British Navy could intercept traffic and have every prospect of bringing a German fleet to battle if it attempted to break out into the Atlantic. Moreover the extensive British coastline offered a wide variety of choice for naval bases, so that the Germans never were quite certain where the main British fleet was located. In the Mediterranean the Austrian Navy was similarly masked by forces acting from the British and French bases and was hampered by the unfavourable strategic conditions in the Adriatic. The Austrian Fleet was indeed almost as securely shut in by the Allies as the Russian Fleet in the Baltic was shut in by the Germans.

The Allied forces were thus in three blocks: (1) The main force, consisting of the British and French, with subsequently the Japanese, Italian and United States Navies, which could combine and arrange themselves as their strategists thought best; (2) The Russian Fleet in the Baltic which was isolated and could only be reached by Allied submarines, failing a decisive defeat of the German Fleet; (3) The Russian Fleet in the Black Sea which was completely isolated. The German Powers' forces were also in three blocks: (1) The German Navy isolated in the North Sea and Baltic by the superior British Fleet; (2) The Austrian Navy isolated in the Adriatic; (3) The Turkish Fleet (reinforced by two German ships which were in the Mediterranean before the outbreak of war) isolated in the Near East. By their control of Egypt and the Suez Canal the Allies commanded the interior line to the Far East, if the German Navy attempted commerce-destroying operations there.

Owing to these geographical conditions the naval war falls into a series of distinct campaigns, of which that in the Black Sea had minor interest and those in the Baltic and Adriatic only secondary importance. The central conflict, surpassing in fierceness anything in earlier naval wars, was the struggle between England and Germany, first on the surface and then under the surface of the sea.

In force the Allies had a marked superiority on paper. The following table gives the strength in the chief classes of ships, actually completed and under construction on July 31, 1914:

BATTLESHIPS IN ACTION

[1914

	Great Britain.		France.		Italy.		Russia.		Japan.		Germany.		Austria.	
	¹ R.	B.	R.	B.	R.	B.	R.	B.	R.	B.	R.	B.	R.	B.
Dreadnoughts ...	20	12	3	4	3	3	0	7	2	2	14	5	3	1
Battle Cruisers ...	9	1	0	0	0	0	0	4	1	3	4	3	0	0
2nd class Battleships ² ...	10	0	9	0	4	0	2	0	4	0	0	0	3	0
3rd class Battleships ...	30	0	11	0	7	0	6	0	9	0	20	0	6	0
Cruisers over 23 knots ...	31	20	3	0	2	0	2	4	3	0	16	6	4	0
Destroyers not over 10 years old ...	98	29	54	3	20	13	30	45	38	2	97	24	18	0
Effective Submarines ...	47	23	35	21	11	9	13	14	4	2	20	23	4	4
Men; peace strength	151,000		69,500		40,000		59,500		51,000		79,000		23,000	

The numerous older ships are not included in this table, but they were of great utility for secondary operations, and the British Navy had a veritable fleet of thirty-four armoured cruisers, nine of which carried fairly heavy armaments (four 9.2-inch guns on the broadside in addition to smaller guns). In the north of Europe and available for service in the North Sea at the outset England had twenty battleships of Dreadnought type and four battle cruisers against fourteen German battleships³ and three battle cruisers of similar quality. The British advantage of forty per cent. (twenty-four to seventeen) was none too great for a navy which had always to be ready to fight and was strategically on the defensive. In destroyers the Germans were quite as strong as the British owing to the absence of sixteen modern British vessels in the Mediterranean. Moreover it turned out that in sea-keeping qualities not more than sixteen of the completed British submarines were equal to the German U boats.⁴ The French submarines were only fit for limited work and incapable of offensive action.⁵

The British strength could be increased and was increased in two ways. The first was by building new ships. The second was by requisitioning ships building in England for foreign Powers. There were three battleships of Dreadnought class nearly complete or actually complete at the

¹ R. = Ready. B. = Building.

² *King Edward* and *Lord Nelson* Classes.

³ One of these had barely completed her trials and was not regarded as ready for action.

⁴ Lord Jellicoe (*Grand Fleet*, p. 16) describes the radius of action and sea-keeping qualities of the U boats as "considerably greater" than those of the British submarines. The wireless in British submarines had a radius of only fifty miles (*ib.*, p. 428).

⁵ Daveluy, *Enseignements*, p. 64.

1914] COMPARISON OF DREADNOUGHTS

end of July, 1914, two belonging to Turkey and one to Chile. They were taken over and renamed *Agincourt*, *Erin* and *Canada*. The British Government did not then know that Turkey had already virtually concluded an alliance with Germany¹ which would have ranged the two Turkish ships against the Allies had they reached Constantinople and have greatly complicated the position in the Mediterranean. Besides these three battleships, there were two light cruisers building for Greece,² three light-draught armoured gunboats of monitor type building for Brazil, and four large flotilla-leaders building for the Argentine, all of which were taken over.

Since the war between Russia and Japan there had been an extraordinary development in the power of the capital ship, or vessel designed for the line of battle. The Dreadnought type and the battle cruiser had been introduced by the British Navy which in this respect as in many others led the world. The characteristic of the Dreadnought type was that it mounted at least eight heavy guns (11-inch or yet more powerful) on the broadside, all of uniform calibre. The battle cruiser was a Dreadnought in which gun power and armour were sacrificed to obtain a much higher speed, and in this type also a broadside of at least eight heavy guns of uniform calibre was aimed at.

So markedly superior were the Dreadnoughts to their predecessors in fire power, speed and protective qualities that the pre-Dreadnoughts, as the older battleships were called, were at a paralysing disadvantage when opposed to them. In the same way the new battle cruisers had a crushing superiority to the older type of armoured cruiser. All the British Dreadnoughts and battle cruisers were turbine propelled and carried a large quantity of oil fuel. The finest vessels of the class, the *Barhams*, incomplete in August, 1914, carried oil fuel only, which was another point of advantage. The new British destroyers were superb vessels, excellently constructed with powerful gun-armaments, and with a few exceptions carried oil fuel only, which relieved their crews of the inordinate toil of coaling. The German boats of the 1913 and 1914 programmes also burnt oil alone.³

In actions between surface ships the extremest importance attaches to gunnery. In this art in the earlier period of the war for some as yet unexplained reason British ships showed

¹ Djemal Pasha, *Memoirs of a Turkish Statesman*, pp. 108-9.

² *Chester and Birkenhead*.

³ *Nordsee*, iii, p. 262.

a marked and most dangerous inferiority to the Germans. At Coronel, at the Falklands, at the Dogger Bank, and in the battle cruiser fight at Jutland, the British fire was slow in getting on the target and the British hits were few in comparison with the German.¹ The British inferiority was in part due to defective range-finding instruments, for in each of these engagements the Germans were hitting at the third salvo, while the British did not hit till much later. The danger of such a state of affairs from the British standpoint needs no emphasis. British ships were liable to be overwhelmed before they could effectively reply. Moreover the small spread of the German salvoes made them peculiarly deadly when they hit.

Rapidity of fire is as important as accurate shooting, and at Tsushima the rapidity of the Japanese fire was one of the chief causes of Togo's easy victory. In this essential factor, again, the Germans seem to have been in advance of the British by all the available reports and accounts of engagements. From Hase's account² of the DERFFLINGER's turrets and gunnery equipment it is known that the German 12-inch gun could be fired with ease every half-minute. This was certainly no faster than the rate at which any of the heavy guns mounted in the largest British ships of that date could be loaded and trained. An actual salvo rate of one salvo per fifteen seconds was attainable with the DERFFLINGER's guns, and in battle against the *Queen Mary* she fired for a relatively considerable period one salvo every twenty seconds. In the SEYDLITZ, as will be seen from the account of the battle of the Dogger Bank, a salvo rate of one per ten seconds seems to have been maintained for a minute or so with the 11-inch gun. Nowhere in the German accounts is there the slightest indication of any such speed of firing by British ships. The impression produced by the German evidence is one of slow firing. As attention has not so far been directed to this point, it is of peculiar importance that it should be thoroughly investigated.

In quality of guns and armour there was nothing to choose between the British and German ships, though tests against the BADEN after the war proved that British armour was a

¹ Cf. F. Young, *Battle Cruisers*, p. 205; Jellicoe in *Jutland Despatches*, p. 2; Unfavourable atmospheric conditions may have seriously hampered the British (See *Engineering*, Mar. 27, 1925, p. 385.)

² *Zwei Weissen Volker*, p. 53. Cf. Galster, p. 117, who says that so far back as 1893 the German Navy was in advance of all navies in rapid firing. The British early in the war seem to have waited for the fall of each salvo before firing the next; the Germans had more than one salvo in the air simultaneously.

little better than the best German of equal thickness. The British Dreadnoughts generally carried guns of a larger calibre than the German, but against this the German ships carried much more armour. Owing to the narrow dimensions of the British docks the British Dreadnoughts had to be built narrow in beam which prevented the British designers from giving them such complete protection for their magazines and vitals as the German ships possessed, and thus the British battle cruisers were intensely vulnerable.

Complaints were heard early in the war of the greater range of the German ships' heavy guns, and it was supposed that their turrets and mountings allowed a higher angle of fire. This, however, was not correct.¹ The mountings were similar in both British and German ships of the same date. The German projectiles in battle proved much more effective than the British, but this was because the British Navy had relied generally on the experience gained in the Battle of Tsushima, where the Japanese had so largely employed high explosive shells with sensitive fuses and obtained decisive results with them, whereas the Russian Navy had fired armour-piercing shells with retarded action fuses (such as the German Navy employed in the Great War) and had yet been beaten. The British shells, therefore, did not penetrate the German armour as they should have done, and when they did penetrate, according to German evidence, seemed lacking in destructive power.² There was another weak point in connection with the British ammunition. The propellant, or powder used in the guns, was put up in silk cases which were highly inflammable. In the German Navy it was contained in heavy brass cases or silk bags protected by an outer covering of tin, and was much less inflammable.

Finally the British torpedo did not explode immediately it struck the target; whereas the British shell exploded too quickly, the torpedo exploded too slowly and was apt to rebound and leave a water-cushion between its head and the target, whence the effect it produced was comparatively small. These defects were due to the absence of an effective staff, and the preoccupation with small details. In the British submarines the tubes were sloped downwards, in the belief that torpedoes would be discharged as the submarine

¹ Twenty degrees or less. *Nordsee*, iii, p. 207. The *Barham* class had twenty-two degrees of elevation. British constructors state that the maximum elevation of the 15-inch guns in the German *BADEN* class was only sixteen degrees. (Institution of Naval Architects, March 16, 1921.) See also *Nordsee*, v, p. 235.

² See Note p. 194.

rose to the surface, but the practical result was that the British submarines, until this defect was removed, had great difficulty in hitting their targets. As for the British mines, few existed and these were of a weak and unsatisfactory type.

The battle fleets of the other Powers never were engaged, and therefore the question of their comparative value does not arise. The French and Italian ships were powerful and well armed, but the Austrian Dreadnoughts, though they carried exceptionally heavy batteries, were not so strongly built as the British or German ships. The French Fleet more than counterbalanced the Austrian Navy and rendered valuable help with its cruisers and small craft in the Channel and Mediterranean.

The British and German battle-fleets in their operations were hampered by the limited fuel endurance of their destroyer flotillas. On neither side had the destroyers ready at the outbreak of war more than enough fuel for a fast run to and from the adversary's naval bases and for one or two days' cruising off those bases. As destroyers were needed to screen battleships against submarine attack, this factor prevented extended operations in the North Sea.

In quality of officers and men there was little difference between the British and German Navies, and this war, for that reason, differs from the wars of the French Revolution and Napoleonic era in which the French Navy had been fatally weakened by the proscription or exile of the best officers and by the shock to discipline caused by the revolution. In courage, in skill, in energy German officers and men were not surpassed by the British. In the encouragement of initiative the German high command was far in advance of all others. The great fault of the German Navy as of the German nation was its lack of humanity and disregard for the moral *imponderabilia*, the importance of which Bismarck knew so well. One signal advantage over the British the Germans enjoyed. They had a long established and thoroughly experienced naval staff, whereas in the British Navy the War Staff had been in existence little more than eighteen months and had not had time to leaven the whole service and to carry out a thorough investigation of the battle arrangements, which proved unsatisfactory. The German tactics were better and in some details of equipment the German Navy was markedly in advance of the British.

The plans of war on either side were largely affected by the proposed operations on land. On the German side the

original intention, from all the indications available, had been to use the powerful German Fleet to deal a tremendous blow at the British main force on or immediately before the outbreak of war, precisely as the Japanese Fleet was used in 1904. The German writers on war emphasised the importance of violent attack and speedy battle. But a variety of circumstances prevented any such plan from being carried out. The British Navy by a curious accident—the decision in March, 1914, to hold a test mobilisation instead of the usual naval manœuvres—had been almost completely mobilised before the period of tension began, and though it started to demobilise, it remained concentrated and in a favourable position. When tension became extreme the wish of the German Government to keep England out of the war, in which case the German Staff felt certain of swift and easy success, led it to forbid the German Navy to take any step which might bring on a conflict with the British.

When war with England was certain and inevitable the decision was not to risk the German Fleet in a great battle but to hold it back for ulterior purposes. Moltke and the German Staff on land were confident of victory over the French and Russians and could not believe that the struggle would be a long one. They expected at an early date to dictate their own terms of peace to France, when Germany would have been free to build up an enormous fleet and compel England to submit. For such a project it was essential that the German Navy should not be destroyed in a battle where everything would have been staked. And thus in the initial period, when the odds against it were certainly less than they afterwards became,¹ the German Fleet was held back, in the hope that tactics of attrition would reduce the British strength.

The German operations were governed by an order which the Emperor issued on the outbreak of war:²

“The aim of operations shall be to inflict loss on the English Fleet by attacks on its vessels which are watching

¹ Strength of the Fleets.

Aug. 1, 1914. May 31, 1916
(Jutland)

High Sea Fleet	Dreadnoughts and Battle Cruisers	17	21
	Light Cruisers and Cruisers	16	11
	Destroyers	89	61
Grand Fleet	Dreadnoughts and Battle Cruisers	24	37
	Light Cruisers and Cruisers	21	34
	Destroyers and Flotilla leaders	42	79

The Germans had also in August, 1914, the only effective airship for naval work, L 3.

² *Nordsee*, i, p. 54.

or blockading the Bay of Heligoland; or, by determined mine and (if possible) submarine offensives, to strike as far as the British coast.

"After equality of force has been secured by such methods, our fleet must seek, when all its forces are concentrated and ready, to engage in battle in favourable circumstances. If any favourable opportunity for battle should offer itself at an earlier date, it must be used."

These were timid, hesitating orders to give to such a force as the German Navy which had been trained to believe itself ship for ship superior to the British. If on land the German plan was too desperately rash, at sea it was too cautious, and committed the very strategical mistake—the pursuit of ulterior aims—which had brought defeat to France in the eighteenth and nineteenth centuries. He who makes it his chief object to avoid injury himself is not likely to injure his adversary. No doubt one of the reasons for German circumspection was the menace of the Russian Fleet in the Baltic which has often been overlooked by British thinkers. If the German Fleet were seriously weakened in a great naval battle with the English there were disagreeable possibilities of Russian action against the German seaboard.

The German plans contemplated cruiser operations against Allied commerce. If England remained neutral the Faeroe Islands were to be used as a base,¹ and arrangements had been made before the war for the establishment of secret bases for cruisers at out-of-the-way points in neutral territory and for the supply of fuel. In addition to German warships on distant stations, auxiliary cruisers were to be employed, drawn from the large German merchant service. But of those which were to have been despatched from German ports on the outbreak of war owing to the German Chancellor's resistance to any measure that might bring a collision with England, only the KAISER WILHELM DER GROSSE succeeded in gaining the open sea. Ample warning that there was risk of war was given to German warships abroad. Souchon in the Mediterranean and Spee on the China station were informed on July 7 and 8, 1914, that the situation was not free from anxiety though three weeks would pass before a crisis was reached and they were able to take measures accordingly.

On the British side, the plans of war which had been prepared in consultation with the Imperial General Staff and the Committee of the Cabinet on Imperial Defence provided for

¹ Conrad, iii, p. 278.

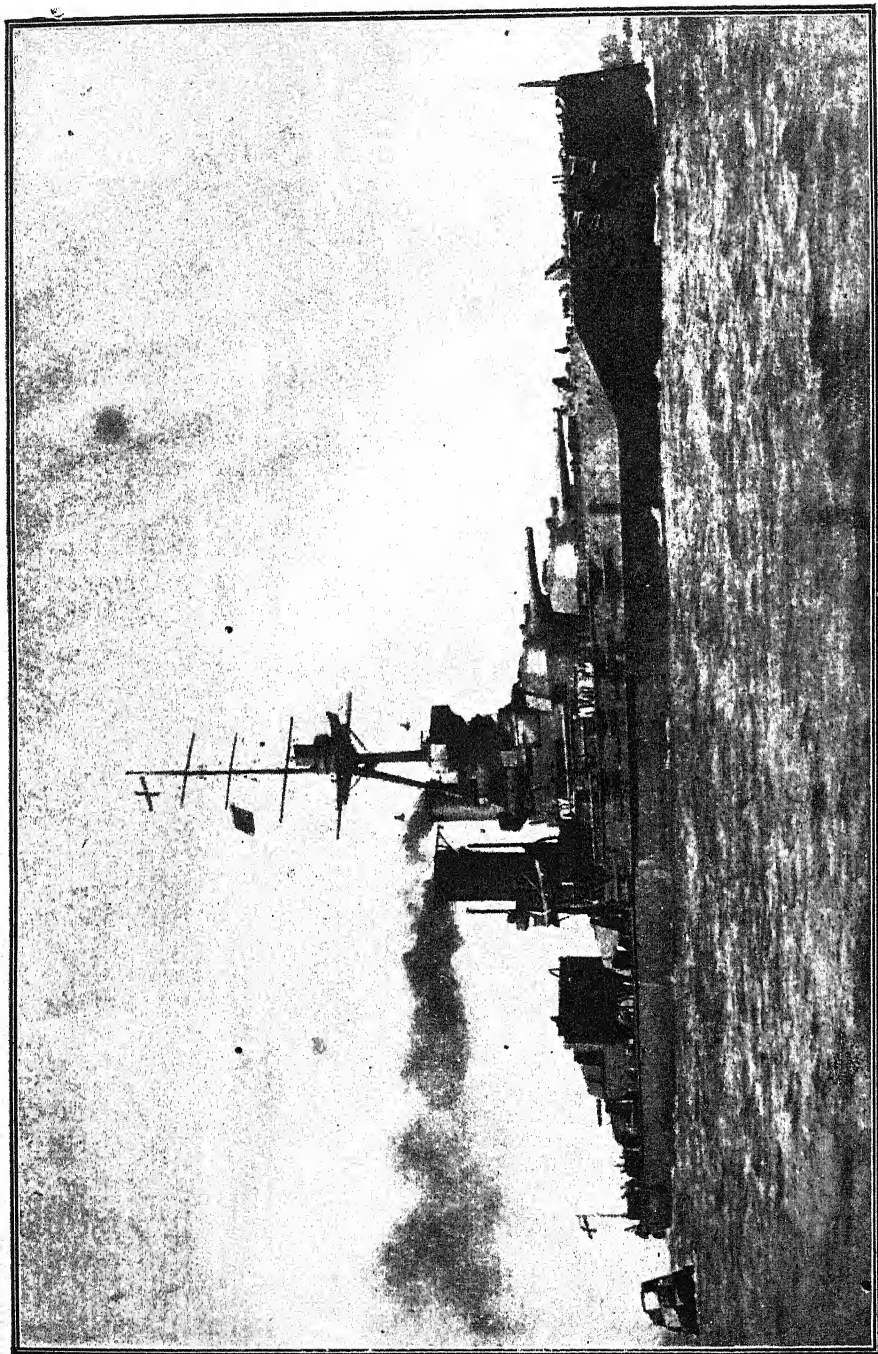
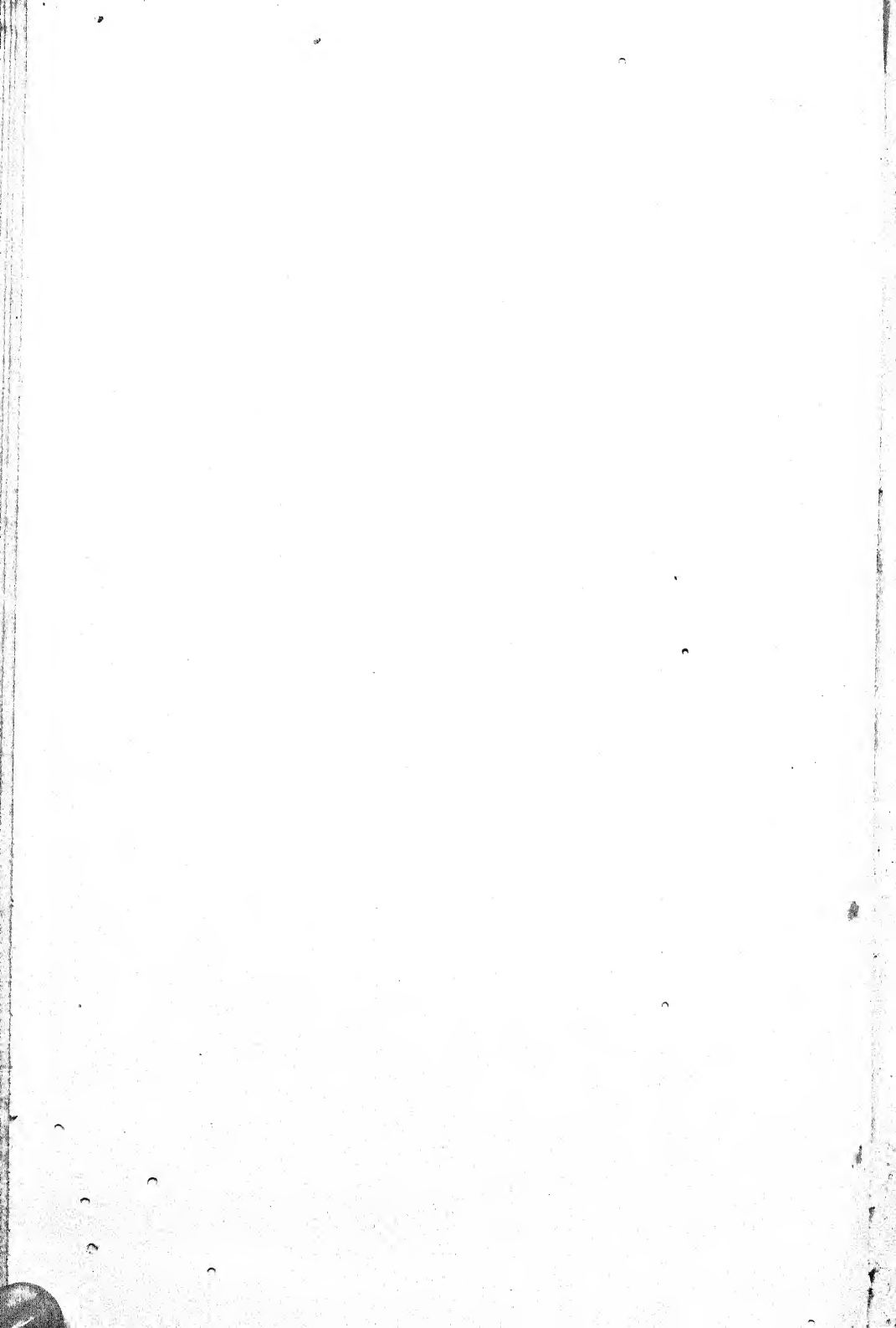


PLATE 23

THE BRITISH BATTLESHIP "IRON DUKE"; FLAGSHIP OF SIR J. JELlicOE AT JUTLAND. EARLY WAR RIG

[p. 10

With her ten 13.5-in. guns, all bearing on the broadside and each firing a 1,400 lb. shell, she was a typical British Super-Dreadnought. She was slightly engaged at Jutland where she made hits on the German Fleet. It was from her quarter deck that Lord Kitchener put off on the day of his death, after the battle of Jutland.



a long-range observation of the German Fleet from bases in the North of Scotland. The main battle fleet was to be stationed at Scapa Flow, in the Orkneys, an enormous sequestered sheet of water, 475 miles from Heligoland, recalling Togo's secret base at Masampo, where it could not easily be watched by spies or aircraft. Little or nothing had been done before the war to prepare this base, and ships in it were for many months exposed to submarine attack and even to destroyer raids, had the Germans shown enterprise. Against this defect may be set the fact that the very absence of preparation may have led the German Navy to look elsewhere for the British.¹ Cromarty was another point chosen for the use of the fleet in war and it had only rudimentary fortifications.

At Rosyth on the Forth, 420 miles from Heligoland, a dockyard with three large docks was in process of construction, but not one of its docks was ready and it was very far from complete in August, 1914, though the entrance to the Firth was protected by works of some strength. On the whole stretch of the northern Scottish coast there was not one single British dock capable of taking Dreadnoughts or battle cruisers ready in 1914. Fortunately a large floating dock was available and was moved from the south of England to Invergordon. The failure to provide proper base accommodation and docks was a grave mistake on the part of the British Admiralty and must be ascribed to the absence of a War Staff before 1912.

The defeat and destruction of the German Fleet was not regarded as the first aim of the naval war. The first object was to cover the despatch of the British Expeditionary Force to France so that here there was a close parallel with the Japanese strategy in 1904. While the British were tactically on the offensive, strategically they were on the defensive and the defensive attitude grew stronger with time. The covering operations were to be carried out by offering battle to the Germans and steaming out towards the Bay of Heligoland, precisely as the Japanese accompanied each despatch of transports by a punch at the Russian Fleet. The British transports, like the Japanese ones, were to sail without convoy. The covering force was to be disposed far to the northeast and the Straits of Dover were to be held by a second line of old ships and torpedo craft. The efficient protection given to the movements of the Expeditionary Force ranks

¹ Cf. Nordsee, i, p. 88, "quite unknown was the station of the First Fleet."

with the quick and smooth mobilisation of the fleet among the greatest achievements of a war rich in wonderful feats. No such loss as the Vladivostock cruisers had inflicted on the Japanese transports was inflicted by the German cruisers or submarines on the British. And this faithful, assiduous guardianship was maintained year in and year out till men ceased to notice it or wonder at its marvel.

Probably owing to the lack of a War Staff before 1912 the Admiralty was not consulted as to the French plan of operations. Yet Plan 17, which was that carried out with slight modification by Joffre, came very near losing the naval war by risking the all-important Channel ports. If Calais and Boulogne had fallen into the hands of the Germans, it is difficult to see how a large British army could have been maintained in France. The importance of these places was ignored by the French Staff in its arrangements, though before the war Sir John French in a memorandum had drawn attention to their value.¹ The Germans with Dunkirk, Calais and Boulogne in their hands as well as Ostend and Zeebrugge, would have been able to attack with deadly effect the British communications with France.

In the plan which Schlieffen had prepared for the German Army about 1905,² at a period before Russia's fighting force had recovered from the effects of the struggle in the Far East, the occupation by the Germans of the whole coast as far west as the mouth of the Somme was contemplated, so soon as a heavy blow had been struck at the French Army. And in the war of 1914-18 it is doubtful whether the Belgian and French coast south-westwards from Nieuport would have been saved for the Allies, but for Sir J. French's decision to move the British Expeditionary Force to the sea on September 16, 1914. British naval strategy would have had to be completely transformed if the control of the Straits of Dover had been lost, and the Grand Fleet must have been brought to the south, where good harbour accommodation for it was not easy to find.³ Such a move would have left the German High Sea Fleet free to raid the Scottish coast and interfere with the British patrols in the North Sea and North Atlantic.

¹ "1914," pp. 155-7. The French Staff was quite unfamiliar with naval conditions.

² Cf. Kuhl, *Generalstab*, p. 182. The [British Official Military History (i, p. 46) believes that the Germans in 1914 intended to occupy the coast, but that the Third and Ninth Reserve corps, meant for the purpose, had to be used against the Belgians in Antwerp.

³ Cf. *Nordsee*, ii, 36-7.

The importance of the naval factor was thus not understood by any of the Continental combatants. They all without exception believed that the war must be short, lasting not much more than a few weeks, and in such a brief period sea power would not have time to make its influence felt. All the navies concerned effected their mobilisations without incident. The first to move was the German, which had been warned by William II on July 5 and 6 of the possible risk of war. The High Sea Fleet none the less was sent on a cruise to the Norwegian coast, where William II was paying his annual holiday visit. On July 20 he advised that the heads of the great German shipping companies should be confidentially warned of the risk of complications after July 23 when the Austrian Note was to be presented to the Serbians. On July 25, hearing reports of the Serbian mobilisation, he ordered the German Fleet to return to its home ports; on July 30 precautionary measures were taken, and on August 1 mobilisation was ordered.

In England the Admiralty, on learning that the German Fleet was returning, at 4 p.m. of July 26, ordered the First Fleet to remain ready and stopped the demobilisation of the Second Fleet which was then in progress. On July 27 the Third Fleet was ordered to complete with coal and ammunition; a light cruiser and four destroyers were ordered to the Shetlands; and four old battleships were ordered to the Humber. A preliminary warning telegram was sent to British commanders on foreign stations and they were told to watch German and Austrian ships quietly. On July 28 all local forces and patrol flotillas were instructed to get ready; and at 7 a.m. on the following day the First Fleet left Portland for Scapa and Cromarty, and the definite telegram of warning was sent by the Admiralty to all commanders on foreign stations.

The precautionary period began in which special measures were taken to prevent surprise attacks and secure the safety of harbours and arsenals. On August 1 the British Government learnt that British merchantmen were being detained in Germany and at 1.25 a.m. of August 2 the naval reserves were called out. Formal orders for the full mobilisation were issued on August 3, on which day the mobilisation was actually completed. It will be observed that, owing to the energy of the Admiralty and the First Lord, ample provision was made against one of the gravest dangers in war—a surprise attack at the very outset. The risk in future will be

even greater owing to the swift development of the air arm. The French mobilisation proceeded simultaneously with the German and British mobilisations. On August 1 Germany declared war on Russia; on August 3 she declared war on France; and at 11 p.m. of August 4 war between her and England began owing to the expiration of the time-limit given her in the British note concerning Belgium.

In its peace organisation the British Navy in home waters was formed in three fleets—the First permanently manned all the year round, consisting of the newest and best ships; and the other two fleets, Second and Third, consisting of older vessels with reduced or nucleus crews. The mission of the First Fleet was offensive; the Second and Third Fleets were employed mainly for defensive purposes. The First Fleet, renamed Grand Fleet on the outbreak of war, consisted of a flagship outside the squadron organisation, and three battle squadrons each of eight battleships, with a fourth of four battleships. Of the twenty-nine battleships in it, twenty were of Dreadnought type.¹ Its cruiser force consisted of four battle cruisers, eight armoured cruisers, and thirteen light cruisers of various types; its destroyer force of one flotilla leader and seventy-five destroyers, but of the destroyers only forty-two were taken north to Scotland. Attached to it were six mine-sweepers and six auxiliaries of various kinds. It contained no torpedo boats and no mine-layers. In command was Acting Admiral Sir John R. Jellicoe (aged 54) who was appointed at the last moment, on the outbreak of war. His chief subordinate was Acting Vice-Admiral Sir David Beatty (aged 43) who had for more than a year commanded the battle cruisers.

The British Navy in the early months was directed by the War Group at the Admiralty, consisting of Mr. Churchill (aged 39), Admiral Prince Louis of Battenberg (aged 60) and the Chief of the War Staff, Vice-Admiral Sir H. B. Jackson (aged 59) who was succeeded on August 29 in his post by Vice-Admiral F. C. D. Sturdee (aged 55), in his turn replaced on November 1 by Rear-Admiral H. F. Oliver (aged 48). Admiral of the Fleet Sir A. K. Wilson (aged 72) gave general advice, as also did Lord Fisher (aged 73). The staff had not had sufficient time to acquire authority, and thus effective control of the Navy rested with an energetic civilian advised by too large a number of officers. Mr. Churchill had a free

¹ Of the other nine, eight were of the *King Edward* class and one was of the *Lord Nelson* class.

hand so far as the Cabinet was concerned. From his initiative, enthusiasm, and administrative qualities he was almost ideally fitted for his post, provided always that he was aided and advised by an experienced staff. This condition was not fulfilled and the staff's weakness led to grave mishaps. One immense service Mr. Churchill rendered. He informed the government that the Navy would guarantee the country against invasion, so that all the six British regular divisions could be sent to France. Unfortunately the government was timid and sent only four.

On the German side the command of the High Sea Fleet was in the hands of Admiral Ingenohl (aged about 57) with Rear-Admiral Hipper (aged about 50) as his chief subordinate. Control was exercised by the Emperor William II, advised by Admiral Pohl (aged 58) the Chief of the Admiral Staff, and Admiral Müller (aged 60) Chief of the Emperor's Cabinet. Admiral Tirpitz (aged 65) the Secretary of the Navy, accompanied the Emperor and exerted considerable influence. He asserts that he was for an energetic offensive at the outset, but this contention of his has been denied by Müller; and the truth seems to be that no responsible person was anxious to order the German Navy to give immediate battle. Afterwards, however, when the consequences of this refusal to fight became clearer, all claimed that they had favoured instant action.

In the other navies concerned the limited scope of the operations renders the question of command of less importance. By an agreement between the British and French Admiralties, the British Navy was to have the general control of operations and the command outside the Channel and the Mediterranean. In the Mediterranean the French Navy was to have control and it was also to exercise the command. In the Baltic, the command of the Russian Fleet, which was much too small and weak to risk battle, was subordinated to the Grand Duke Nicholas, who was in charge of the Russian armies. The Russian Admiral and commander-in-chief under the Grand Duke was Essen (aged 54), who died in May, 1915.

The High Sea Fleet in the German Navy corresponded to the British First Fleet. Its effective fighting force on the outbreak of war consisted of a flagship, outside the squadron organisation; and three battle squadrons; the first of eight vessels of Dreadnought type; the second of eight pre-Dreadnoughts of very inferior fighting quality; and the third of five Dreadnoughts. Attached to it was a battle cruiser squadron

of three battle cruisers reinforced by the BLÜCHER on August 8. There were also four old armoured cruisers and eleven light cruisers. The destroyer force numbered eight flotillas each of eleven boats. The High Sea Fleet included in its organisation the usual auxiliaries, mine-layers, mine-sweepers, repair ships and salvage vessels. Behind the three battle squadrons of the High Sea Fleet were two battle squadrons of older ships, each seven strong, and a battle squadron of antiquated coast defence ships, eight strong. These subsidiary forces were employed mainly in the Baltic for secondary work and were too weak to be risked in the North Sea.

There was also a squadron of four armoured cruisers, which were too slow and feeble to be used against the British. The German Navy had at its disposal excellent bases with ample dock accommodation, and in this respect had a marked advantage against the British. Heligoland, in the gulf or bay¹ of that name, was strongly fortified, and had a good harbour for torpedo craft and submarines on outpost duty. It was distant only 240 miles from the Thames mouth, and about 220 miles from the nearest point of the English coast in Norfolk.

The initial operations in the North Sea were unimportant. In the evening of August 3, British cruisers began their watch of the channel between the Orkneys and Shetlands, and on August 4 Jellicoe was ordered to proceed east with the battle-ships of the Grand Fleet (as the main British Home Fleet was henceforth known) as far as 2 degrees east, while the battle cruisers and other vessels swept to the neighbourhood of the Norwegian coast. It was known that German commerce-destroyers were putting to sea, and this movement was designed to stop them. News of the British declaration of war was received while the fleet was at sea, at midnight of August 4-5, and was accompanied by a message from the King:

"At this grave moment in our national history I send to you, and through you to the officers and men of the Fleet of which you have assumed command, the assurance of my confidence that under your direction they will revive and renew the old glories of the Royal Navy, and prove once again the sure shield of Britain and of her Empire in the hour of trial."

Nothing was seen of the Germans, and the fleet returned

¹ Generally known as "the Bight" in the War.

to Scapa to refuel on August 7. It made only a short stay in that harbour because of the risk of submarine or destroyer attack. On August 8, for the first time in war, a torpedo was fired by a submarine—U 15 (Lieut.-Commander Pohle)—without success at the British battleship *Monarch* when engaged in target practice, south-east of Fair Island.

This boat formed one of a force of ten U-boats which on August 6 put to sea from the Bay of Heligoland, to sweep up the North Sea in a line seventy miles wide to a point midway between the Orkneys and Norway and find the supposed British blockade line. They had no success, only catching occasional glimpses of British warships. One of the boats, U 13 (Lieut.-Commander Count Schweinitz) with the unlucky number, was never heard of again, and as she was not claimed by the British, must have been lost through some defect. U 15, early on August 9, was seen and rammed by the *Birmingham* (Captain A. M. Duff) light cruiser, and went down with all on board. She was the first submarine to be sunk by hostile action in war.

On August 5 all the German submarine cables were skillfully severed and the German Government was forced to rely for quick communication upon wireless and messages sent through neutrals. Meantime, in the southern waters of the North Sea and the Straits of Dover, there had been stirring events. On August 3, Rear-Admiral Rouyer was ordered by the French Government to steam to the Straits of Dover with eight old and weak French armoured cruisers and prevent the passage of the German Fleet through it. It was an order which would have meant destruction for his ships if the High Sea Fleet had appeared. But at 6 p.m. that day when Rouyer had taken up his position, smoke was seen approaching from the north. He had no means of knowing that the smoke was not from German battleships or cruisers. As it drew closer, he made out a flotilla of British destroyers led by a light cruiser—the first sign that England was entering the war. There was an extraordinary demonstration of enthusiasm on both sides; and the joint watch of the Channel began.

In the evening of August 4, some hours before war began, the German converted mine-layer KÖNIGIN LUISE left Emden to lay mines off the British coast. She reached a point about thirty miles east of Harwich, far outside territorial waters and in the highway of neutral traffic, where she proceeded to lay mines. While so engaged at 11 a.m. of August 5 the

British destroyers *Lance* and *Landrail* (each 29 knots, three 4-inch guns) came upon her and chased her, followed by the British light cruiser *Amphion* (Captain C. H. Fox, 25 knots, ten 4-inch guns). The German vessel was quickly overwhelmed and was so damaged that her crew sank her. Her officers and men were rescued by the British, who then carried out a sweep towards the Dutch coast. They were returning from this sweep when at 6.30 a.m. of August 6 the *Amphion*, unaware of the exact extent of the German mine-field, ran into it and struck two mines in succession, the last of which must have exploded her magazines. She went down with a loss of 149 officers and men and 18 German prisoners. The German casualties in this affair were 73 killed or drowned and 20 wounded.

The action of the German Navy in laying mines in a highway of neutral traffic without notice or warning was a grave offence against the laws of humanity,¹ though off Port Arthur in 1904 the Russian Navy had set the example. One of the immediate results was to embitter feeling in the British Navy against the Germans, who now appeared to be the enemies of the human race. The *Amphion* was a new ship, launched in 1911 and displacing 3,500 tons. Her loss was a serious matter. She was the first surface warship sunk in the war.

In British home waters strong forces of destroyers and submarines with a few torpedo boats were on guard. In the Straits of Dover was the Dover Patrol, at this date two cruisers and twenty-two destroyers strong, with ten C class submarines. In the Humber was a flotilla of one light cruiser, twenty-two destroyers and twelve torpedo boats; in the Tyne one of one cruiser, eight destroyers and twelve torpedo boats; and in the Forth one of one cruiser and eighteen destroyers. At Harwich was one of the most active and enterprising of British commanders, Commodore Tyrwhitt, with thirty-five modern destroyers of the First and Second Flotillas and three light cruisers; and on the same port was based the most powerful of the submarine flotillas, the 8th, consisting at the outbreak of war of seventeen boats of the D and E classes under Commodore Keyes. In the Channel were nineteen old battleships under Vice-Admiral Sir C. Burney. For cruiser patrol work in the North Sea there were the 10th Cruiser Squadron (eight old protected cruisers of over 7,000 tons), and the 7th Cruiser Squadron

¹ Garner, i, p. 329 ff.

(five old armoured cruisers of Cressy class and 12,000 tons).

During the passage of the Expeditionary Force from Southampton to Havre Tyrwhitt's destroyers maintained a patrol line from Harwich to the Dutch Coast, supported by the 7th Cruiser Squadron. The Straits of Dover were held by the British and French destroyers supported by three light cruisers, and ten of the older submarines. The Channel Fleet was kept concentrated and ready to act off Portland. On the Atlantic side the transports were screened by the British 12th Cruiser Squadron (four old cruisers) operating with the French 2nd Cruiser Squadron (eight armoured and one light cruiser.)

Each side in the North Sea war was puzzled by the caution of the other, and most surprising to the British was the absence of any effort on the part of the German Navy to interfere with the movement of the Expeditionary Force to France, which began on August 9 with the despatch of train and staff corps troops. The explanation of the German inactivity was curious: Moltke himself had informed the German Admiral Staff that the German Army would be "only too content to be able to settle accounts with 160,000 British troops," when it was striking in the west, and added that he did not wish the German Navy to allow action against the British transports to interfere with its operations.¹ None the less William II suggested, on August 8, "onslaught by torpedo craft and mine-layers and in particular by U-boats" on the First Fleet, which he presumed was out in the North Sea, covering the movement of transports. The Germans throughout imagined that the British were crossing to Zeebrugge or Ostend instead of to Havre and Boulogne.

All that took place was a sortie of four U-boats which, without the support of surface ships, could do nothing. Three of the four were compelled by bad weather or breakdowns to return at once; the fourth saw no sign of British transport movements, and this negative result probably contributed to the German Supreme Command's belief as late as August 22 that no considerable British force had landed on the Continent. So effective was the British censorship that both German Navy and Army were completely in the dark about British movements and dispositions. When the main body of the British Expeditionary Force was crossing, from August 14 to 17, the Grand Fleet was well

¹ *Nordsee*, 1, p. 82.

out in the North Sea, with its cruisers sweeping to the south-west of Horns Reef. But the Germans remained inert, except for submarine reconnaissances.

On August 17, however, two of the fastest light German cruisers, STRALSUND and STRASSBURG, were ordered to locate and attack the supposed British destroyer cordon in the North Sea, and three battle cruisers in the Jade were ordered to have steam up to give them support, if it should be required. The STRALSUND was sighted by the British light cruiser *Fearless* and ten destroyers of the 1st Flotilla in the early morning of the 18th off the Dutch coast. There was an interchange of shots without result. When a fifth British division was sent to France, after the first four divisions, the Grand Fleet on August 22 proceeded into the North Sea and the battle cruisers *New Zealand* and *Invincible* were stationed in the Humber to support the British cruisers and light craft.

Difficulties for the British Navy began to increase in late August; Ostend was hurriedly abandoned by the Belgians on August 21 owing to the rapid advance of the Germans, and the German cavalry were expected to seize it forthwith. On August 22 Rear-Admiral Christian was ordered to demonstrate off it with three old armoured cruisers and a destroyer force; he landed and reconnoitred Ostend, but the place clearly could not be held without adequate military force which was not available. On August 23 Mons was fought and the whole Allied left began a rapid retreat, so that all the Channel bases were in danger.

Up to this point the German war of attrition had inflicted in the North Sea the loss of only one vessel (the *Amphion*) upon the British against a German loss of two submarines and one auxiliary mine-layer.

CHAPTER XVIII

Battle of Heligoland—British Force Engaged and Plans—German Dispositions—Tyrwhitt's Flotillas Attack—"Frauenlob" and "Arethusa"—Goodenough Withdrawn—Beatty Engaged—"Mainz," "Ariadne" and "Cöln" Sunk—British Retirement—Heavy German Losses—William II Forbids Naval Sorties—"Pathfinder" Sunk—"Hela" Sunk—"Aboukir," "Hogue" and "Cressy" Sunk by U 9—Effect of the Disaster—British Mine the North Sea—"Hawke" Sunk—Germans Seize Zeebrugge—Four German Destroyers Sunk.

On August 28, 1914, was fought the battle of Heligoland. The British submarines during their watch in the Bight of Heligoland had obtained detailed information about the dispositions of the German light craft. The British War Staff, to cover the expedition to Ostend, decided to carry out a sweep with British cruisers, destroyers and submarines, in hope of cutting off some of the German vessels on outpost duty. The British forces engaged were thus organised:

1ST BATTLE CRUISER SQUADRON (Vice-Admiral Sir D. Beatty):
Lion, Queen Mary, Princess Royal (battle cruisers, each eight 13.5-inch guns broadside).

CRUISER FORCE K. (Rear-Admiral Sir A. G. H. Moore): *Invincible, New Zealand* (each eight 12-inch guns broadside).

7TH CRUISER SQUADRON (Rear-Admiral A. H. Christian):
Euryalus, Bacchante, Cressy, Hogue, Aboukir (all armoured cruisers, each two 9.2-inch and six 6-inch guns on broadside), *Amethyst* (light cruiser, six 4-inch broadside).

1ST LIGHT CRUISER SQUADRON (Commodore W. E. Goodenough):
Southampton, Birmingham, Falmouth, Nottingham, Lowestoft (each five 6-inch guns broadside), *Liverpool* (two 6-inch and five 4-inch broadside).

BATTLESHIPS IN ACTION

[1914

SUBMARINE FLOTILLA (Commodore R. J. B. Keyes): destroyers *Lurcher* (flag) and *Firedrake* (each two 4-inch guns, 32 knots). Submarines *E 4*, *E 5*, *E 6*, *E 7*, *E 8*, *E 9* (each two 12-pounders, two torpedo tubes).

3RD DESTROYER FORCE FLOTILLA (Commodore R. Y. Tyrwhitt): *Arethusa* (flag, light cruiser, 30 knots, two 6-inch and three 4-inch broadside). Destroyers *Lookout*, *Leonidas*, *Legion*, *Lennox*, *Lark*, *Lance*, *Linnet*, *Landrail*, *Laforey*, *Lawford*, *Louis*, *Lydiard*, *Laurel*, *Liberty*, *Lysander*, *Laertes* (each three 4-inch guns on broadside, 30 knots, oil fired).

1ST FLOTILLA: *Fearless* (light cruiser, five 4-inch broadside, 25 knots). Destroyers, *Acheron*, *Attack*, *Hind*, *Archer*, *Ariel*, *Ferret*, *Forester*, *Druid*, *Defender*, *Goshawk*, *Lizard*, *Lapwing*, *Phoenix*, *Badger*, *Beaver*, *Jackal*, *Sandfly* (last four destroyers attached to Cruiser Force K; each of these seventeen boats two 4-inch guns and 27-32 knots speed); *Lucifer*, *Llewellyn* (each three 4-inch and 30 knots).

By the original plan submarines *E 4*, *E 5*, and *E 9*, were to take up positions north and south of Heligoland and wait for a good opportunity to attack. *E 6*, *E 7*, and *E 8* were to station themselves some distance west of Heligoland and show themselves above the surface, with the object of drawing the German light craft in pursuit to sea. The 1st and 3rd Flotillas of destroyers were to be twenty-five miles west of the island of Sylt at 4 a.m., and were then to steam south to a point about twelve miles west of Heligoland, where they were to turn, form in line abreast and sweep westwards, when it was hoped that they would cut off a considerable number of German light craft. By the original plan the supporting force was to be limited to the two battle cruisers of Cruiser Force K and the old vessels of the 7th Cruiser Squadron. But when the plans were sent to Jellicoe on August 26, he most wisely ordered Beatty to proceed into the Bight of Heligoland with the First Battle Cruiser Squadron and sent the 1st Light Cruiser Squadron with him.

As a further precaution he steamed with the whole battle force of the Grand Fleet to a point about 100 miles south-east of the Orkneys on August 28. In view of the possibility that the contemplated sweep might bring on a general action, it would have been prudent to move the Grand Fleet much nearer the scene of the intended operations. Tyrwhitt and Keyes had already left for Heligoland when Jellicoe issued

these orders and they were not informed of them—one of the many examples of defective staff work at the opening of the war. The British destroyers and submarines were therefore in danger of taking Beatty's and Goodenough's ships for enemies and attacking them.

It was low water on this part of the German coast at 9.30 a.m., which meant that the heavy German ships in port would not be able to put to sea during the morning. The day was calm with a very light north-west wind and a good deal of mist; the visibility for aircraft near the surface never exceeded four miles, and was often much less, and owing to these conditions the fighting took the form of a series of disconnected actions with little unity of control. Though a British destroyer had been reported in the evening of August 27 off the Texel, the Germans were completely surprised. Nine new destroyers of the 1st Flotilla (each 30–32 knots and two 3.4-inch guns) were on guard at daybreak, disposed in a quadrant thirty-five miles from the Elbe Lightship, and available to support them were the light cruisers HELA, STETTIN¹ and FRAUENLOB,² disposed in a quadrant fifteen miles from the same Lightship. In the harbour at Heligoland was the 5th Destroyer Flotilla of ten boats (each two 3.4-inch broadside and 32 knots), and eight submarines, but of the submarines only two were ready for action. The old light cruiser ARIADNE² was at the mouth of the Weser and the modern light cruiser MAINZ³ at the mouth of the Ems. All the German battle cruisers and battleships were in port and unable to go out till the tide rose. The light cruisers CÖLN³ (flagship of Rear-Admiral L. Maass commanding the torpedo flotillas), STRASSBURG³ and STRALSUND³ were in Wilhelmshaven, and the CÖLN was coaling. From their small draught they could put to sea whatever the state of the tide.

About five that morning the German destroyer G 194 was narrowly missed by two torpedoes fired from E 7. She reported the attack to Rear-Admiral Hipper, commanding the German cruiser force, who ordered the German aircraft at once to go out and search for the submarine, and subsequently directed Maass to send out the 5th Destroyer Flotilla to join in the hunt. The next important event was that just before seven, G 194 sighted the *Arethusa* and four destroyers coming down fast from the north-west, and wa

¹ Five 4.1-inch guns broadside, 24 knots.

² Five 4.1-inch guns broadside, 21 knots.

³ Each six 4.1-inch guns broadside, 27 knots.

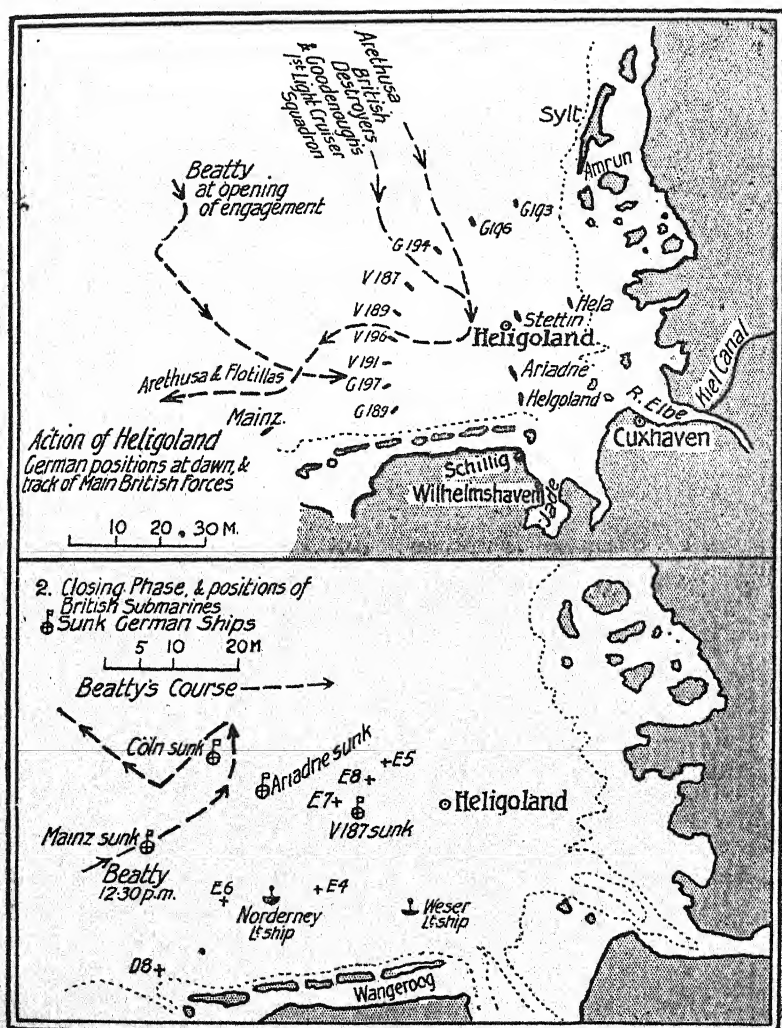
chased and fired at by these British ships. G 196, which was to starboard of G 194 in the cordon, also sighted British destroyers and gave the alarm. A little later V 187, to port of G 194 in the cordon, reported two British cruisers close at hand; and shortly afterwards sent a wireless report to the effect that two further British cruisers had appeared.¹ There was considerable delay in getting the wireless signals through to the CÖLN, and meantime the German destroyers were hotly engaged with a strong force, estimated by them at two to four cruisers and twenty destroyers, which had broken into their line of patrol.

The German destroyers turned and fled towards Heligoland before this superior force, consisting of the *Arethusa*, *Fearless*, and the two powerful British destroyer flotillas. Hipper ordered the STETTIN and FRAUENLOB with the available submarines to go to the aid of his destroyers, but only two of the U-boats could put to sea at once, and they took no part in the engagement. The batteries ashore at Heligoland and Wangeroog (at the Jade mouth) were manned on the sound of firing being heard, and all the German light cruisers made ready to go out, while the battle cruisers SEYDLITZ, MOLTKE and VON DER TANN, and armoured cruiser BLÜCHER, also prepared to put to sea so soon as the depth of water might permit.

The two British light cruisers and the British destroyers pressed eagerly after the retiring German destroyers of the 1st and 5th Flotillas, engaging them at long range in a running fight. S 13 and V 1 dropped behind and signalled that they could not maintain their speed. V 1 was hit twice and her speed dropped to 20 knots, when, as she was on the point of succumbing to the British attack, the cruiser STETTIN appeared on the scene at 7.58. This intervention saved the 5th Flotilla, and when her own destroyers had got clear of the British attack the STETTIN fell back to the shelter of the Heligoland batteries. The German accounts maintain that her object in so retreating was to give time to get up steam, as all her fires were not lighted when the British appeared. She sustained only insignificant damage—a single hit which killed or wounded 7 men.

The British light cruisers and destroyers had now pushed to the neighbourhood of Heligoland, and in their advance came upon a number of weak old destroyers of the 3rd

¹ Probably these were the *Nottingham* and *Lowestoft*, sent on by Goodenough to support the flotillas.

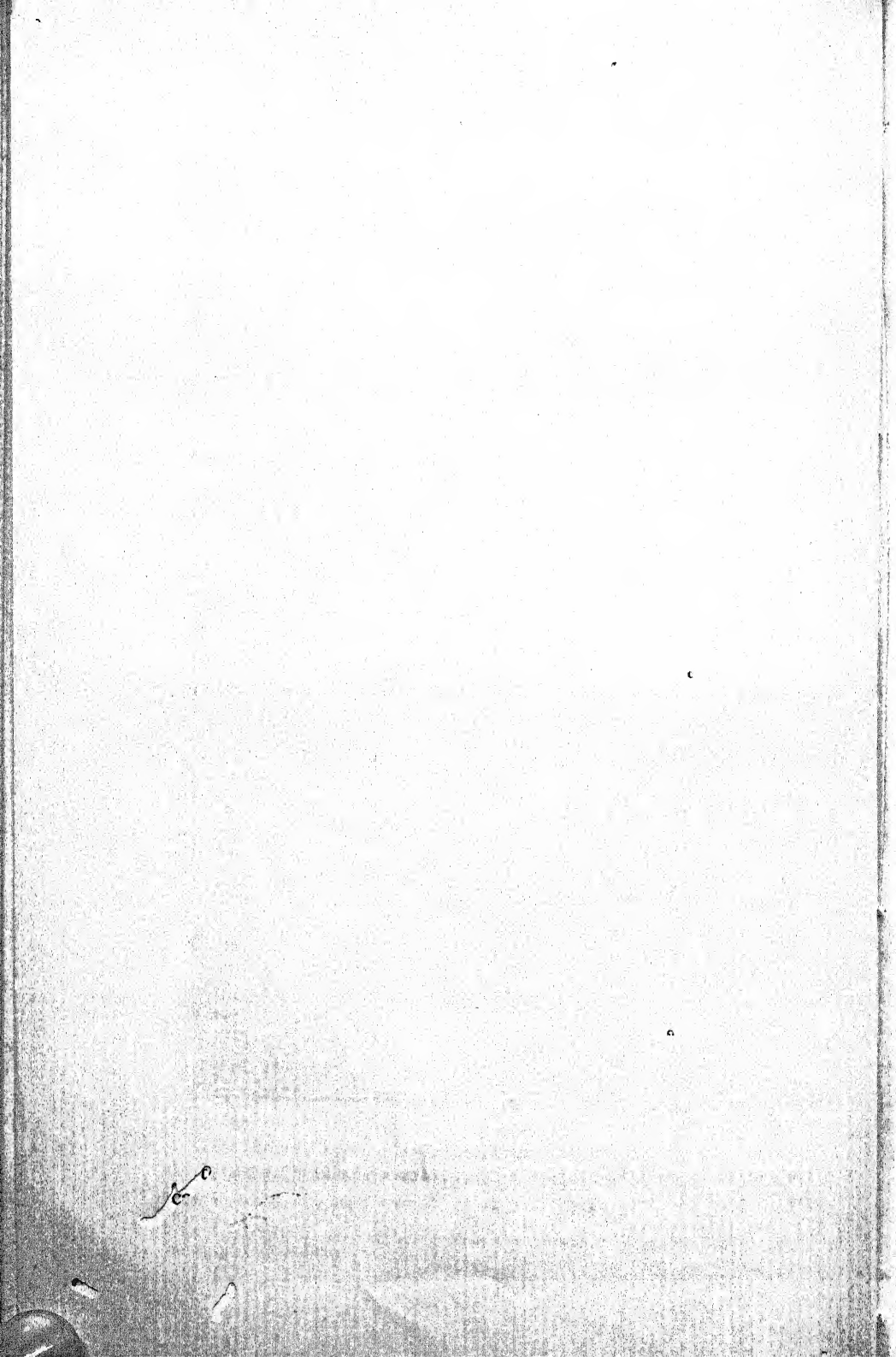


PLAN 23.

[p. 24

HELIGOLAND, 1914

The dotted line shows the 5 fathom line (30 ft. of water) inside which heavy ships could not venture.



Minesweeping Division. At one of these vessels, D 8, 600 rounds were fired and she lost 13 killed and 20 wounded. Another of the division, T 33, was hit on the engine room and badly damaged. Once more the German small craft were saved from destruction by the gallant intervention of their cruisers. The ancient vessel FRAUENLOB soon after 8 a.m. sighted and opened fire on the *Arethusa* at a range of 6,000 yards. The *Arethusa* was beyond question the more powerful ship, thoroughly modern and equipped with a much heavier battery, but she had only been commissioned on the previous day, so that she was at some actual disadvantage. The encounter between the two light cruisers ended indecisively, but the *Arethusa* was hit no fewer than twenty-five times¹ and for some minutes only one 6-inch gun of her battery remained in action. According to the Germans, she retired; it seems more probable that the action was broken off by the FRAUENLOB, which had one bad hit on her conning tower.

During this action the *Fearless* and her destroyers of the 1st Flotilla sighted V 187 coming down towards Heligoland and attacked her. The German destroyer fled towards the Jade, finding herself cut off from Heligoland, and got away from the British destroyers, when at 8.45 she came upon two four-funnelled cruisers, and took them for the STRASSBURG and STRALSUND, both of which formed part of the High Sea Fleet. She mistook a signal from them for the German recognition signal, and thus these two vessels (which were the British light cruisers *Nottingham* and *Lowestoft*, detached by Goodenough to support the British destroyers) were able to approach V 187 within a range of 4,000 yards where their 6-inch guns could hit with deadly effect.

The German destroyer made desperate attempts to escape, but found the destroyers of the 1st Flotilla in her course when she tried to double back. She was repeatedly struck and about 9 a.m. orders were given by her commander (Lieut.-Commander Lechler) to sink her, and she went down with flag flying, still firing. Of her crew of ninety, 24 were killed and 14 wounded and 33 unwounded men were taken prisoners. While the British vessels were rescuing the Germans in the water the STETTIN arrived and, obviously unaware of what was taking place, opened fire. The British cruisers had vanished in the mist and smoke and the destroyers, left alone, had to retire abandoning two boats with a number of prisoners on board, many of them wounded. The British

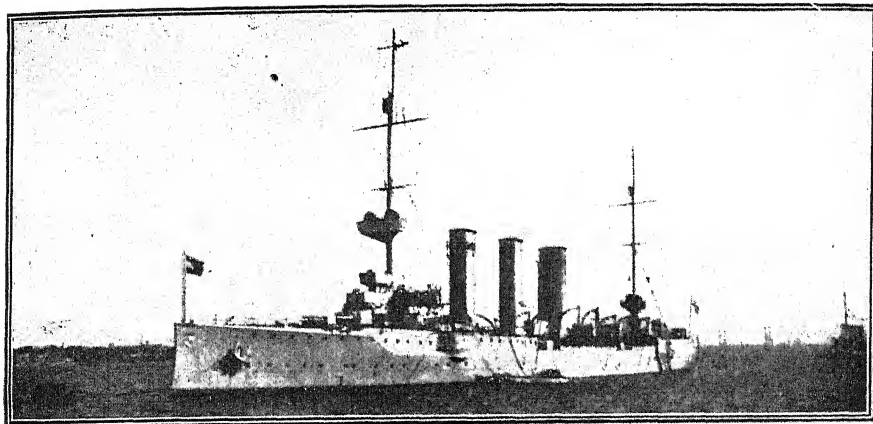
¹ Knight, *The Harwich Naval Forces*, p. 31.

submarine *E 4* however, at this juncture appeared, drove off the *STETTIN* by an attack which just failed to sink that ship, and then came to the surface and removed the British from the abandoned boats and gave the Germans in them food, water and their position and course before again submerging.

The first part of the engagement was over and the total haul made by the British was only one German destroyer. The British destroyer force mustered and reformed before it proceeded west, while the *Arethusa* executed repairs. Her speed had fallen most seriously owing to her injuries. Shortly before ten, Keyes, who commanded the submarines, sighted four of Goodenough's four-funnelled cruisers, and just as *V 187* had mistaken two of them for German ships, so he thought that they were enemies, as he was not aware that the 1st Light Cruiser Squadron was to co-operate. He sent out a signal for help and Tyrwhitt, receiving this, at once steered east to aid him. As a matter of fact, at ten the mistake was discovered and Keyes and Goodenough recognised one another and conferred. It was decided that Goodenough should withdraw his ships and leave the field clear for the British submarines.¹ A British cruiser had already attempted to ram *E 6*, mistaking her for a German boat, and the attack was only eluded by a quick dive under the ship.

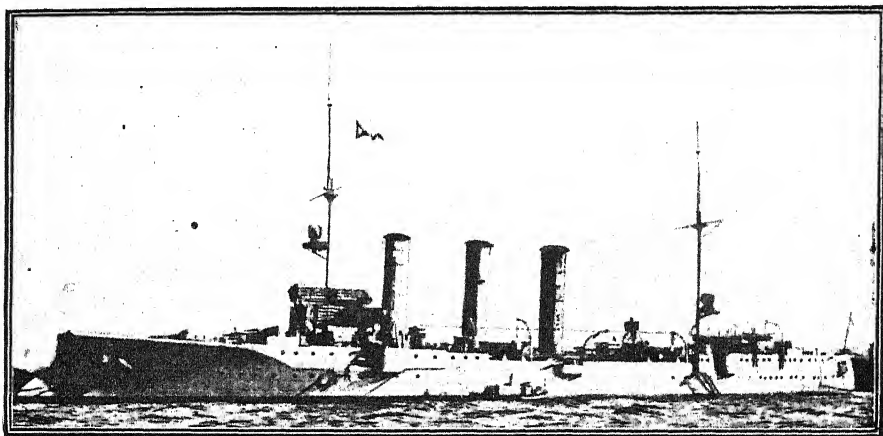
Tyrwhitt was in an exposed position not far west of Heligoland when at 10.55 the German cruiser *STRASSBURG* came out of the haze and immediately attacked the British. The Germans mistook the *Arethusa* and *Fearless* for two of the much more powerfully gunned "Town" class of British cruiser and engaged at long range, which was perhaps fortunate as the *STRASSBURG* was a new ship of great power. There was a scrambling interchange of salvos in the mist and smoke before the destroyers drove her off by a torpedo attack. A second time she appeared, and a second time she vanished; and during the second attack Tyrwhitt appealed to Beatty for support. Beatty on receiving the appeal first of all ordered Goodenough to take the *Southampton*, *Birmingham*, *Falmouth* and *Liverpool* to Tyrwhitt's aid, and then determined himself to lead his battle cruisers to the scene of action. It was well that he did so, as the German light cruisers were pouring out of their bases and the position of the British light flotillas was becoming dangerous.

¹ Cf. *Nordsee*, II, pp. 18-19. Both British and German Navies discovered that the co-operation of surface ships and submarines was difficult and dangerous in presence of enemy submarines.



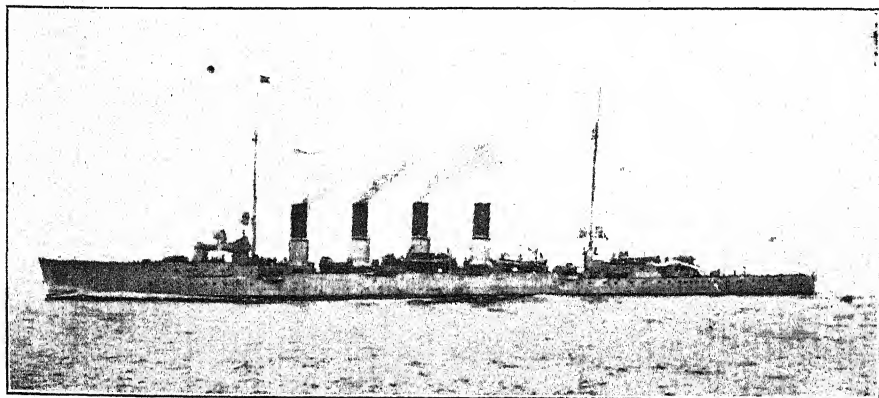
THE GERMAN LIGHT CRUISER "MAINZ," SUNK AT HELIGOLAND

She was a typical light cruiser of the pre-war period but was too lightly armed. One of Tirpitz's sons was serving in her and was taken prisoner. The *Cöln*, also sunk at Heligoland, was a sister ship. [See p. 27.]

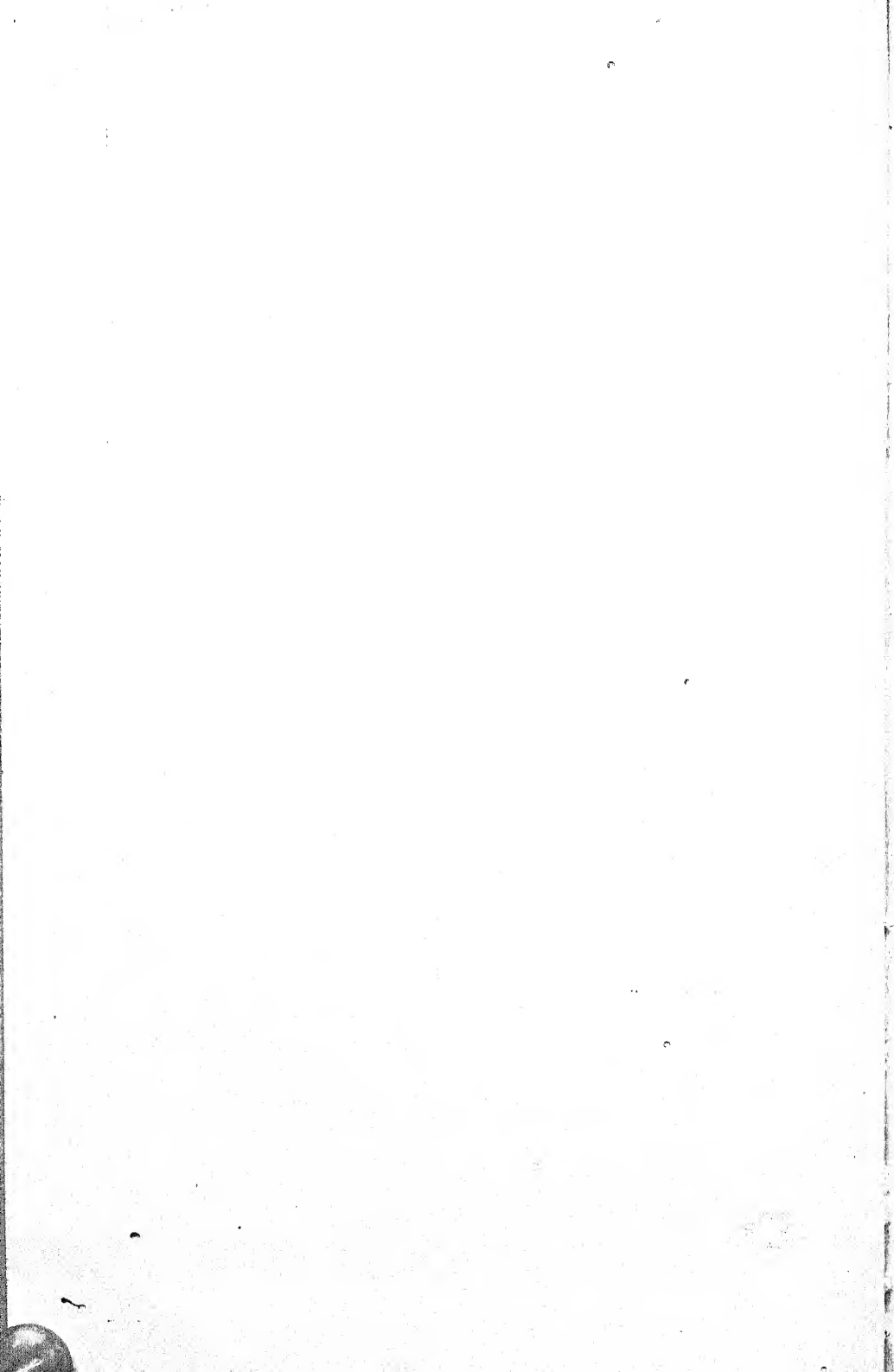


THE GERMAN LIGHT CRUISER "LEIPZIG"

Was in the Pacific at the beginning of the war; joined Spee's squadron at Easter Island. She fought at Coronel and was sunk by the *Cornwall* and *Glasgow* in the battle of the Falklands. [See pp. 62-3]



THE GERMAN LIGHT CRUISER "BRESLAU"



At 11.30 the MAINZ, steaming up from the Ems, sighted the *Arethusa*, *Fearless* and the British destroyers, and opened fire on them. She was engaged with them when Goodenough's powerful light cruisers came up and joined in the action with her, making the odds against her overwhelming. Her rudder jammed, seemingly as the result of a shell-hit from a British destroyer, and she began to turn round and round. She was still able to fight, and salvos from her caught the *Liberty*, *Laertes* and *Laurel*, killing Lieut.-Commander N. K. W. Barttelot of the *Liberty*. She in turn was struck by a torpedo from one of these destroyers amidships on her port side. In a desperate position, unmanageable, and the target of many British guns, she was so badly injured that the order was given by her own officers to sink her. But she still remained afloat when about 12.30 Beatty appeared on the scene with his battle cruisers, and she did not go down till after 1 p.m. Of her crew 348 were rescued by the British and taken prisoners.

Beatty, with his battle cruisers and Goodenough's four light cruisers, steamed farther east into the Bight of Heligoland and came upon the German light cruiser CÖLN. She had just appeared out of the mist and had attacked the *Arethusa* and the 3rd Destroyer Flotilla. At 12.37 the battle cruisers opened on her damaging her so badly that her wireless was heard no more, and she fled trying to obtain shelter in the mist. For some minutes the attention of the British was diverted to the old cruiser ARIADNE which had steamed towards the sound of firing and now came into view. The *Lion* fired two salvos into her at close range before she once more vanished in the smoke and haze, burning fiercely and helpless, though she remained afloat till 3.25. After the ARIADNE had been thus disposed of, Beatty, receiving mistaken reports from the British destroyers that the Germans were scattering floating mines, ordered his cruiser force to withdraw. On the way out of the Bight he again sighted the CÖLN at 1.25 and put two more salvos from his big guns into her. She sank at once, and the British, believing that German submarines were near at hand and were actually attacking, could give no aid to her men. Of all on board only a stoker survived; he was rescued by a German destroyer two days later still floating in the water. The British battle cruisers also fired a few long range shots at other German vessels which they met in the mist, among them the STRASSBURG and STETTIN.

The action had closed and at 2 p.m. the British could see nothing more of the Germans. The German commander-in-chief, Ingenohl, at 1.25 ordered his fourteen Dreadnought battleships to raise steam with all speed; his three battle cruisers were already preparing to go out. From the vagueness of his cruiser's reports he remained under the delusion that the British force attacking him was composed of only two destroyer flotillas with two, or at the most, four small cruisers. Not until 1.35 p.m. when a signal came through from the STRASSBURG, "First Battle Cruiser Squadron in Square 117 e," did he realise the position, and at once recall all the light cruisers. The destroyer flotillas were ordered to be ready for action at dusk. The British withdrawal was effected without misadventure, though the damage to the *Arethusa* and *Laurel* was so serious that they had to be taken in tow by the *Hogue* and *Amethyst* respectively. Both ships were speedily repaired.

The German loss was:—

SUNK:	Tons.	Launched.	Killed.	Wounded.	Prison- ers.	Total.
Cöln ..	4,280	1909	506	0	0	506
Mainz ..	4,323	1909	89	—	348	437
Ariadne ..	2,618	1900	64	62	0	126
V 187 ..	640	1910	24	14	33	71
OTHER SHIPS ENGAGED:						
Stettin ..	3,396	1907	4	14	—	18
Frauenlob	2,672	1902	9	27	—	36
V 1 ..	689	1911	1	2	—	3
T 33 ..	85	1888	2	6	—	8
8 ..	350	1890	13	20	—	33
Total ..			712	149	381	1,242

The British loss was 32 killed and 55 wounded, of whom the *Arethusa* lost 11 killed and 16 wounded, the *Laurel* 11 killed and 12 wounded, and the *Liberty* 8 killed and 10 wounded. According to the Admiralty statement 60 of the German prisoners taken were badly wounded. Rear-Admiral Maass was among the dead—the first flag officer killed in the war—and one of Tirpitz's sons was among the prisoners.

The German management of the action was bad. It was a mistake to allow the light cruisers to engage one by one

against an adversary of unknown strength in misty weather. As the result three light cruisers, two of them excellent ships, and one destroyer were sunk with heavy loss of life to the Germans, and with no object of any kind except to prove that German officers and men would fight bravely to the last, which no one had ever doubted. The German submarines took no part in the engagement, for though most of the British vessels reported sighting periscopes or being actually attacked by U-boats, the German records show that none were engaged and the reports must have been due to imagination, or to the appearance of British submarines on or near the surface. On the British side the superiority of force was so overwhelming that there never could be any doubt about the result. The British destroyers in this action learnt that a small cruiser has a great advantage over even a considerable number of large torpedo craft from her steadier platform and superior fire control appliances. The secret of the British success was to be found in the fact that the British strength was only gradually disclosed and not revealed at the very outset. The Germans reported the British destroyer armaments much superior to their own, though poor ammunition and shells which failed to explode rendered the British fire less effective than it should have been. But in torpedo tactics the British destroyers were thought to have failed.¹

Tirpitz's criticism of the German command was that orders ought to have been given, immediately the British were reported, for the whole German Fleet to put to sea. That was unquestionably the sound course if the tide permitted (which it did not). The sortie of the fleet would not necessarily have involved an infraction of the Emperor's veto on fighting a pitched battle with the Grand Fleet, as the German Fleet being close to its fortified base need not have engaged if the British had been present in superior force. William II's verdict, given to the Chief of Staff, Pohl, was that the German Fleet had become over-confident as the result of the inactivity of the British. He ordered that steps should be taken to prevent any repetition of such surprises and forbade the fleet to go out or send out its cruisers without his authorisation. The German command made a larger use of aircraft for patrol work and protected the inner waters of the Bight by mine-fields, and these measures proved quite effective.

¹ *Nordsee*, ii, p. 91. Tirpitz points to the failure of the British torpedo attacks as a proof of bad training. But see i, p. 203, 211.

The Emperor's renewed prohibition of naval sorties put a stop to the High Sea Fleet's activity just at the time when large-scale movements of troops from the Dominions and India were beginning. It deprived the German cruisers in distant waters of that support which vigorous operations by the German Navy in home waters against British shipping and the British Fleet alone could have given, and without which those cruisers were certain to be hunted down and destroyed. The history of naval war shows that cruisers and torpedo craft cannot produce serious effect without such support. On the German Navy the influence of the battle was a most depressing one. Officers and men felt that the lost cruisers had been unnecessarily risked and badly supported. Yet, after all, the German defeat was mainly due to the excess of the offensive spirit which had been developed in the German service, and which was a few weeks later in the British Navy to lead Cradock and his cruisers to a similar doom.

On the British side after the battle there were constant submarine alarms, one of them at Scapa Flow on September 1. No German U boat was near, but none the less the whole Grand Fleet was ordered to raise steam and proceed to sea, such was the feeling of insecurity in that open anchorage; and in fog Jellicoe's ships steamed out into the Pentland Firth. The bulk of the fleet remained at sea till September 5 when the Dreadnoughts in the battle squadrons retired to Loch Ewe to coal. Meanwhile steps were taken to close all the channels into Scapa Flow except Hoxa and Hoy Sounds, though not for many weeks could the Flow be regarded as even tolerably safe. Early in September a sweep was carried out by the British battle cruisers and cruisers towards the Skager Rack without sighting any German vessels. On September 5, the British light cruiser *Pathfinder* (Captain F. M. Leake, 2,800 tons, 25 knots, five 4-inch guns broadside) was sunk by U 21 (Lieut.-Commander Hersing) off the Forth, the first surface warship to be sunk by submarine. The *Pathfinder* was on patrol with the 8th Destroyer Flotilla when at 4.45 p.m. Hersing hit her with a torpedo which must have exploded her magazines, as she went down at once with a terrific explosion. Of her crew, 259 were killed and 16 wounded. After this sad incident the British precautions against submarines in the Forth area were more successful and there were no further losses there of important surface ships during the war.

As some protection for the Dreadnoughts of the fleet against mines, the old battleships of the 6th Battle Squadron were brought to Scapa, and when proceeding to sea through unswept waters, placed ahead of the Dreadnoughts. For this reason they became known as the "Mine-Bumping Squadron." They consisted of the *Russell*, *Albemarle* and *Exmouth* and were withdrawn in November, 1914, for service in the Channel.

On September 8-10 to cover the transport of the 6th Division to France, the Grand Fleet with the Harwich flotillas executed a great sweep of the North Sea, but the German surface ships were held in and only skirmishing between the submarines of the two navies took place. On September 12 the German Fleet for the first time since the beginning of the war carried out battle exercises in the North Sea, as Ingenohl assumed that the weather, which was bad, would prevent any British submarines from interfering.

Next morning, however (the 13th) the old cruiser *HELA* (2,000 tons, launched 1895, broadside two 3.4-inch guns) was returning to port from patrol duty near Heligoland when two torpedoes were fired at her by *E 9* (Lieut.-Commander M. K. Horton) the second of which struck her and sank her in twenty-five minutes. All her crew except ten men were rescued; the inferior effect of the British torpedo as compared with the German was a disagreeable discovery. *E 9*'s attack, which was executed with admirable skill and daring, led the German Staff to despatch the German battle squadrons one at a time to the Baltic for exercises, which meant that the High Sea Fleet was left too weak to think of fighting a battle. Its attitude became one of complete passivity.

As the result of various German mine-laying enterprises on the high seas on September 3 the old British torpedo gunboat *Speedy* was sunk off the Tyne with a loss of 1 killed and 2 injured, but the minefields were used by the Admiralty as a protection for the mouths of the Humber and Tyne, and when once they had been located caused no trouble.

On September 22 the British Navy suffered one of the greatest disasters of the war. Early that morning the old armoured cruisers *Aboukir*, *Hogue* and *Cressy*, were patrolling between the German minefield off the Thames and the Dutch coast, steaming at 10 knots, two miles apart, without zigzagging and without any screen of destroyers. The weather had been so bad that the destroyers which should have accompanied them had been obliged to make for port.

Four days before Mr. Churchill, very properly alarmed by hearing this unhappy force described in the Grand Fleet as "the live bait squadron," had written a minute declaring that large cruisers ought not to be kept on "this beat" because the risk was quite unjustifiable. But so slow was the Staff in acting that they had not been withdrawn, and now terrible loss was the result. For some days these cruisers had been upon the same beat, so that the Germans had had every opportunity of learning their position. The first news of catastrophe came in to the wireless room at the Admiralty, which received the message constantly repeated: "Aboukir, Hogue sinking," in a position about thirty miles west of Ymuiden.

At 6.30 a.m. that morning when the three armoured cruisers were on their patrol there was a tremendous explosion on the starboard side of the *Aboukir*, and she began to sink. No submarine had been seen, and it was at first supposed that the *Aboukir* had struck a mine. Orders had not then been issued to British ships to keep away from sinking comrades when the proximity of a submarine was suspected, and the *Hogue* went to the *Aboukir's* aid, only herself to be immediately hit by two torpedoes. The *Aboukir* sank twenty-five minutes after her hit; the *Hogue* in ten minutes. The *Cressy* did not steam off, which was the only safe course, but remained stationary to assist the men in the water, and just as she began to move she was hit first by one torpedo and then by a second, so that she also turned over and soon went down. The successful attack was delivered by U 9 (Lieut.-Commander O. Weddigen), a submarine of 500 tons and twenty-eight crew, carrying two bow and two stern 18-inch torpedo tubes and six torpedoes. In his report Weddigen comments on the manner in which the large British ships one after the other offered themselves as victims to his attacks. This was much the most remarkable feat accomplished by submarines in the war, but it was accomplished with the help of faulty British dispositions, defective tactics, and grave Staff blunders. As the result 62 officers and 1,397 men perished, and 60 officers and 777 men were saved, many of them through the signal gallantry of the officers and men of the Dutch steamers *Flora* and *Titan*. The German Official History, not without reason, comments on the carelessness of the British arrangements.

Twenty-eight British officers and 258 men rescued from the submarined ships by the Dutch steamer *Flora* were

landed in Holland. They were allowed to return to England under the 10th Hague Convention, which provides that a hostile warship can demand the surrender of rescued officers and men on board a neutral merchantman, but does not require the neutral to do what the belligerent has failed to accomplish.¹ U 9 might have required the *Flora* to convey the British to a German port, it would seem, but as she did not they were able to take further part in the war. Most of the great roll of dead were married reservists with families.

Instructions were issued in the British Navy after the loss of the ships as to the methods which should be adopted in similar circumstances. The rescue of men was thenceforth left to the small craft, trawlers or destroyers, which almost invariably accompanied heavy ships in dangerous waters. It is perhaps true that only experience, and experience of such a disastrous kind as was obtained in this calamity, could demonstrate the risks that attached to faithful comradeship. It is quite possible that, if a heavy German ship had been sunk in presence of sister vessels, they would have behaved with the same "chivalrous simplicity"² as the luckless *Aboukir* and *Cressy*. In the *Cressy* Captain R. W. Johnson paid for his devotion to humanity with his life. An inquiry which was held blamed the senior officer, Captain J. E. Drummond of the *Aboukir*, for not more closely following Admiralty instructions, but pronounced his error fully atoned for by his conduct after the disaster.

The effects of the catastrophe were far reaching. Without doubt it encouraged the German Navy to plan submarine war on a great scale and gave a marked impetus to the construction of submarines. It led the German people to press impatiently for the abolition of all restraints on the U boat war and it filled them with exaggerated hopes of the results that were to be expected from it. The blow was never repeated, and with better arrangements and a stronger spirit of initiative on the part of the officers concerned it would never have been possible.

It was generally supposed in the British Navy at the time that several submarines had co-operated in the attack, and that they had further been aided by neutral fishing craft or German vessels under neutral flags. There was no real foundation for either belief, though it was true that a number of Dutch fishing boats were not far from the point

¹ Hall, *Law of Naval Warfare*, p. 176.

² Churchill, *World Crisis*, i, p. 325.

where the three hapless armoured cruisers were sunk. The speed with which the cruisers went down was a disagreeable fact, and the more disagreeable because they had all watertight doors closed. Their destruction proved definitely that the old vessels of the pre-Dreadnought era were incapable of withstanding torpedo attack, without such special protection as was afterwards provided in some of them by fitting them with the "bulge." This "bulge" was a system of small compartments filled either with air or with shock-absorbing material, on and below the water-line, which gave entire security against destruction by mine or torpedo in the war.

The loss of the cruisers led the Admiralty to modify the arrangements for the protection of the line of communications with France and it was decided to lay a large minefield, closing the stretch of water from the Goodwins to the Belgian coast at Ostend. This decision was notified to neutrals on October 2, and as they had not protested against the German action in mining open waters of the North Sea they had no course but to accept it. A passage was left open for traffic under the Kent coast. On October 1 neutral fishing craft were excluded from British East Coast ports and the western portion of the North Sea. This was necessary for British security, as indeed earlier generations of English monarchs and statesmen had seen when they asserted against all comers British sovereignty of the Narrow Seas.

The protection which this minefield gave was largely illusory, as it used to be a joke that the mines only exploded when a British ship happened to run in among them, and they were too few in number and of too defective a pattern to frighten any but an extremely cautious enemy. The Germans, however, were intimidated at the outset. The southern portion of the North Sea was cleared of heavy British ships, and the German cruisers and battle cruisers were given undoubted opportunities of striking against the British communications with France, which they entirely failed to use. The German Staff in this period discussed various offensive enterprises, but they were to have been aimed at the British forces watching the northern entrance to the North Sea, and they were not to be executed till Turkey entered the war and the land operations took a more favourable turn.¹

Among them was a blow at the British northern patrol by German cruisers and battle cruisers, supported by four

¹ *Nordsee*, ii, pp. 90, 93.

battleships of the KAISER class (the latest Dreadnoughts) in co-operation with U boats off the British bases. Both commands, British and German, realised that partial successes were not to be won without risking the whole available force. As in the Port Arthur campaign in each operation there was a possibility that in succession larger and larger forces would be engaged, till the main fleet had itself to join in. The German Government was still convinced that the German Main Fleet must be held back for ulterior purposes, and the Kaiser on September 25 issued an order to that effect.

In the British Fleet a conference was held at Loch Ewe on September 17. Mr. Churchill, various staff officers and Admiral Jellicoe, with other British commanders, discussed a bombardment of Heligoland. It was to have been carried out by old battleships, covered by the modern vessels of the Grand Fleet. The plan was rejected as impracticable, and, in view of all the experience of naval war, there can be no doubt that the decision was correct. Against the exceedingly strong German works it would have been impossible to use the only effective system of attack—high angle fire from heavy howitzers or guns. The plan of a movement into the Baltic was also discussed and rejected, because, before it could be carried out, the German Fleet in the North Sea must be eliminated. It refused to fight a pitched battle and there were not the mines required to mine it in. The impasse in the North Sea thus continued.

On Mr. Churchill's return from the conference a stroke of some importance was tried by the Navy with a small force composed mainly of Marines which landed at Dunkirk and demonstrated against the German flank and communications from September 20 onwards. It was commanded by Brig.-General Sir G. G. Aston and its total strength (1,500 men, about half of them recruits and the other half elderly reservists) was insufficient to produce much impression on the Germans, though it seems to have caused some uneasiness in their high command. Lord Roberts had suggested the despatch of four or more territorial divisions, but his scheme was politely ignored.

The new British minefield had hardly been laid when it became necessary to sweep a channel through it to reach Zeebrugge, in connection with the British plans for the support of Antwerp, a campaign which belongs to the history of land war; and two British mine-sweepers were sunk in the business without a soul on board escaping. But on

October 6 submarine *E 9* achieved her second success by hitting amidships the old destroyer *S 116*. The explosion of the torpedo cut *S 116* in half and she sank with a loss of 9, 55 of her crew being rescued. Nine days later, on October 15, Weddigen in *U 9* at 10.30 a.m. torpedoed the old British protected cruiser *Hawke* (launched 1891, 7,350 tons) on patrol duty with the 10th Cruiser Squadron in the North Sea. She sank at once and in her 525 officers and men perished. Twenty-one were picked up near the scene of the disaster and 49 in a boat were rescued by a Norwegian steamer. A second U boat, *U 17*, attacked the *Theseus* in the same squadron early that afternoon and narrowly missed her. The British cruiser by a sharp turn avoided the shot. In this squadron proper precautions were being taken so that the loss of the *Hawke* made a deep impression, though just before she was hit she had stopped to pick up her mail and that, no doubt, contributed to her easy destruction.

On the following morning *U 9* was east of Scapa Flow, and boldly attacked a group of four British destroyers aiming a torpedo at the *Alarm*, which avoided it by a sharp turn. The *Nymph* tried to ram *U 9* but Weddigen submerged too quickly to be damaged. Further to alarm the command of the Grand Fleet came a report that a German submarine had been seen inside Scapa Flow. This was pure imagination, but the attacks on the cruisers and destroyers showed how dangerous the position was, and Jellicoe decided in deep secrecy to move the Grand Fleet to some less exposed base, such as one of the harbours on the west coast of Scotland or Lough Swilly, till the anti-submarine defences at Scapa could be completed. The result of such a movement must be to leave the North Sea uncovered, and if the Germans had shown more enterprise they might have struck with effect against the British coast and the highly vulnerable collection of shipping at Dover. This was already threatened by German submarines working down the Channel, despite the British minefield. The withdrawal of the Grand Fleet south-westwards was followed on October 17 by a curious episode. *U 20*—then on her way north about from the Channel—sighted four large British ships without destroyer escort, steaming at high speed off the Butt of Lewis, a spectacle which so startled her commander that he did not attack.

Disasters continued on land. On October 16 Zeebrugge was occupied by the Germans who thus obtained an excellent and well equipped base near the Channel. The failure of the

French command to realise the importance of this place from the naval standpoint was significant. It is not too much to say that the loss of Zeebrugge came very near losing the naval war for the Allies; it was one more disastrous consequence of Plan 17. The Germans at once decided to lay mines in the Downs and Thames mouth and despatched four old destroyers, S 119, S 115, S 117 and S 118 (each 413 tons, fifty-six crew, three 4-pounders, two machine guns) in the morning of October 17 from the Ems. They would now be able to fall back on Zeebrugge if they were attacked.

The British Staff had already detected indications of this move and the new light cruiser *Undaunted* (sister of the *Arethusa*, 30 knots, two 6-inch and three 4-inch broadside) was sent out towards the Dutch coast with the destroyers *Lance*, *Lennox*, *Legion*, and *Loyal* (each 30 knots, three 4-inch guns). At 2 p.m. the British sighted the Germans and dashed upon them. The old German boats were quickly overhauled and were sunk one after another with heavy loss after a most gallant resistance to overwhelming force. At 4.30 p.m. the unequal encounter was over; the British loss was only 1 killed and 4 wounded: 224 German officers and men were killed or drowned and 31 taken prisoners, of whom one immediately died of his wounds. Such a feeble force ought never to have been risked against the powerful British destroyer flotillas. The blow probably discouraged the German command from attempting further attacks with surface ships at a critical time in the south of the North Sea.

Early the following morning, October 18, British warships seized the *OPHELIA*, claiming to be a German hospital ship. She had been sent from Heligoland to pick up survivors from the German destroyers, but as she had been guilty of irregularities and had communicated in code with the German wireless station at Norddeich she was arrested and subsequently condemned. The reasons were her use of code, her officers' destruction of papers and documents as she was being boarded, the absence on board of any hospital equipment, and the presence of 1,220 Very lights which could only be intended for signalling purposes.¹ The German Official History alleges that British hospital ships also used code and were similarly equipped, but this was not true till the end of the war, when the Germans had deliberately adopted the policy of attacking hospital ships and there was no further reason for observing restrictions.

¹ Hall, *Law of Naval Warfare*, p. 108.

CHAPTER XIX

Spee's Cruiser Squadron—British Movements against it—Spee Doubles Back to Samoa—Papeete Bombarded—"Leipzig" and "Dresden"—Germans Concentrate at Easter Island—Craddock's Approach—Disastrous Staff Mistakes—A Problem of Leadership—The Squadrons in Touch—Battle of Coronel—Accurate German Fire—Explosion in the "Good Hope"—"Monmouth" Sunk—Figures of the Action—Causes of the Defeat—Fisher's Despatch of Battle Cruisers to Destroy Spee—Sturdee's Silent Movements—Spee off the Falklands—Battle of the Falklands—A Long-Range Action—"Scharnhorst" and "Gneisenau" Sunk—Hits and Damage—"Leipzig" and "Nürnberg" Sunk—Escape of the "Dresden"—Sunk in Chilean Waters.

OUTSIDE European waters Germany maintained in 1914 only one considerable force, the Cruiser Squadron under Vice-Admiral Count von Spee, in the Far East with its base at Kiaochau. It consisted of five effective units, the sister armoured cruisers SCHARNHORST and GNEISENAU (each 11,420 tons, 22½ knots, 6.9-inch steel armour, broadside six 8.2-inch and three 5.9-inch guns), and the three light cruisers EMDEN, NÜRNBERG and LEIPZIG (steaming 23 to 25 knots, with broadsides of five 4.1-inch guns each). On July 7 Spee, who was at Truk in the Caroline Islands with the two armoured cruisers, was warned that there was risk of complications and advised to await further instructions from Berlin. He proceeded to Ponape, another remote island, and was there by wireless kept informed of political and naval developments. On August 5 he learnt that China was expected to be neutral, as also was Japan, if the Germans abstained from any attack on British territory in East Asia; and he received the news that England had entered the war.

The NÜRNBERG had already joined him, and with her and the two armoured cruisers he left for the remote harbour of Pagan in the Ladrões on August 6. There numerous colliers were to meet him. By the plans drawn up before the war his squadron was to steam to the west coast of America and operate against British commerce, if Japan and England were hostile to Germany; and on August 12 he learnt by indistinct wireless signals from Kiaochau that Japan was taking action. At Pagan he found the light cruiser EMDEN with the auxiliary cruiser PRINZ EITEL FRIEDRICH and several colliers. On her way from Kiaochau the EMDEN had captured on August 4 her first prize, the Russian volunteer cruiser *Riasan*. The LEIPZIG was absent on the west coast of America and was not in company.

Spee's position was not at all comfortable. Though none of the allies knew where he was, strong hostile forces were at no great distance from him. The British commander on the China station, Vice-Admiral T. H. M. Jerram, had indeed given the Germans a good chance of striking a heavy blow against a section of the British squadron, as, maintaining a complete wireless silence, he steamed with the armoured cruisers *Minotaur* and *Hampshire* and the light cruiser *Newcastle* to the German wireless station and base at Yap, to put it out of action, and was off it on August 12. On the previous day he captured and sank a German collier at the very time when he was short of coal.¹ In view of the high quality of the two German armoured cruisers and the admirable shooting of their crews, which was well known throughout the Far East, he was taking considerable risks. Spee's four ships would have had the distinct superiority in broadside, and it is the first principle in war not to engage a formidable enemy with half your force. Powerful Japanese squadrons, however, were at no great distance from Spee, and on the Australian station was the battle cruiser, *Australia* besides two modern light cruisers (*Sydney* and *Melbourne*) and certain ancient vessels of minor efficiency.

On August 13 a council of German officers was held at Ponape, and Spee decided to take all his force to the Chilean coast, detaching the EMDEN for the attack on commerce in the Indian Ocean. He left that same evening with the other ships and eight colliers. An unsuccessful attempt was made to obtain definite news about Japan's attitude from the

¹ The weather was so bad that he could not coal at sea, and his complements were so low that he could not spare a prize crew.

wireless station at Guam, an island belonging to the United States, but information was refused.¹ The NÜRNBERG was sent on to Hawaii to warn the German Admiralty of Spee's intended movements and request the German colliers to concentrate on the west coast of Chile.

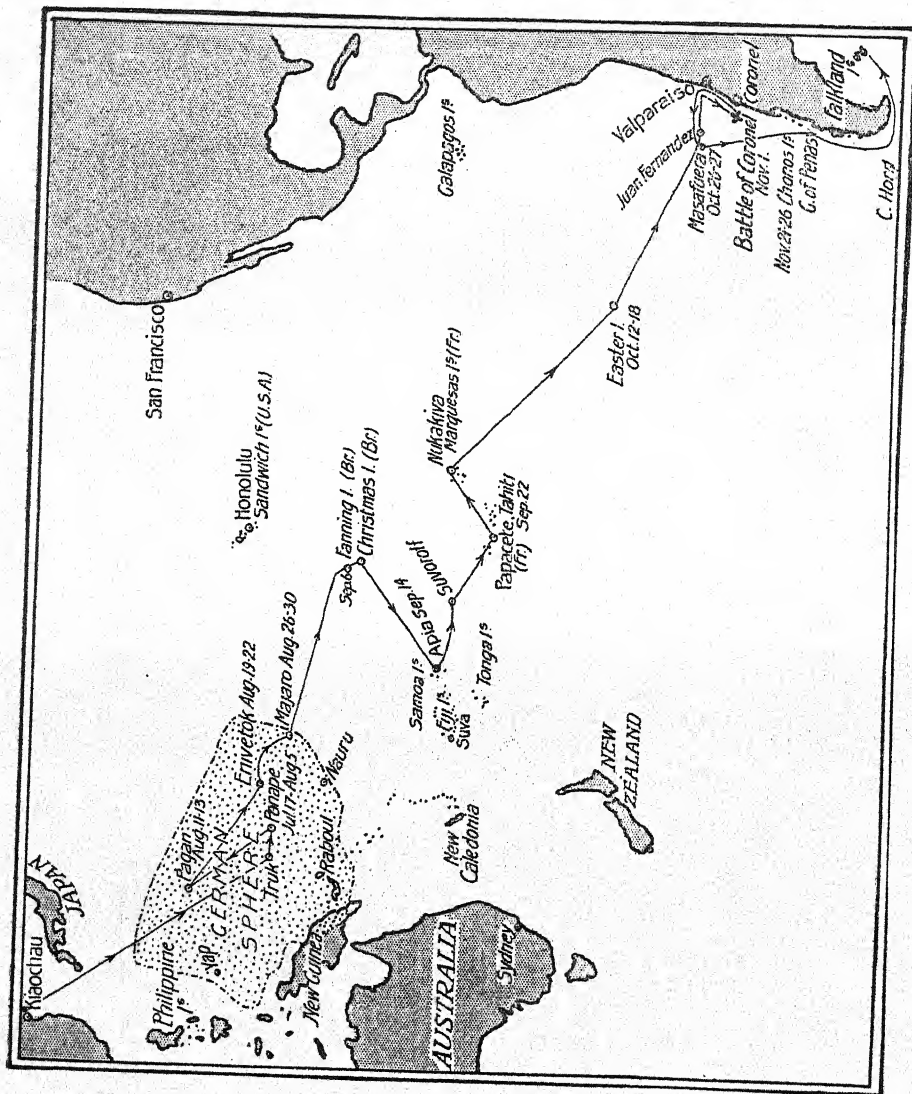
Spee slowly steamed eastwards. He heard on August 30 the Japanese battle cruiser, *Kongo*, exchanging wireless signals with the British battle cruiser *Australia*. On September 6 the NÜRNBERG rejoined him having broken at Fanning Island the great British cable which spans the Pacific from Canada to Australia. The cable was also cut by the German auxiliary *TITANIA* and so effectually that it was not again in working order till November 6. The NÜRNBERG had difficulty in obtaining coal at the United States port of Honolulu, and was only permitted to ship 700 tons. Meanwhile the British were searching for Spee in the neighbourhood of New Guinea, and a New Zealand force escorted by Rear-Admiral Sir G. E. Patey, commanding on the Australian station, with his flag in the battle cruiser *Australia*, and with the light cruisers *Melbourne*, *Psyche*, *Pyramus* and *Philomel* and the French old armoured cruiser *Montcalm*, arrived off the German base of Apia in Samoa on August 30. The wireless station there was secured and a small garrison left. The British were able to make this move because of the loyal action of Japan, who had undertaken to protect British commerce on the trade routes even in the period before her ultimatum to Germany expired, which was till August 23.

Spee learnt of the British expedition to Apia and conceived the daring idea of doubling back and attacking Patey's squadron with his two armoured cruiser. If the *Australia* had been at Samoa he hoped to use torpedoes against her. He was off Apia on September 14 but the British ships had gone, and he steamed east to Papeete in Tahiti where on September 22 he shelled the batteries² which did not reply to his fire, and caused some damage. The French authorities sank two vessels, one of them the old gunboat *Zélée*, and set their coal dépôt on fire to prevent its capture.³ As Tahiti had no wireless station the appearance of the Germans there remained unknown to the Allied Naval Command for several days. But on October 4 the Suva (Fiji Islands) British wireless station picked up a German code signal, which was

¹ The United States Government closed all wireless stations to belligerent messages—a very proper procedure. Cf. Hall, *Law of Naval Warfare*, pp. 144-6.

² They mounted only four 2.6-inch guns.

³ Chack, 1, p. 279.



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read, the British at this date having obtained the secret of the German code—"Scharnhorst on the way between the Marquesas and Easter Island." Spee had been driven east and the western Pacific cleared by the pressure of the Japanese and British forces, which immediately seized the German bases. Rabaul and the wireless station at Nauru capitulated on August 17;¹ the German gunboat KOMET was captured on the New Britain coast on October 11; and the Japanese occupied the Caroline and Marshall archipelagoes.

By moving to the west coast of South America Spee was moving to the zone where the British were weakest from their want of coaling stations and wireless facilities. He was also threatening the supply of nitrates, on which the Allies relied for explosives. In this quarter of the world the British had no force of any kind beyond the old cruiser *Rainbow* of negligible fighting value, used as a Canadian drill ship, and two weak sloops, the *Algerine* and *Shearwater*. These two were on the Mexican coast protecting British interests, and near at hand was the powerful German light cruiser LEIPZIG (five 4.1-inch broadside) which could have blown them both out of the water with perfect ease. Fortunately for them, on the outbreak of war they were able to reach Esquimalt, but only after considerable delay.

As for the LEIPZIG she cruised off San Francisco for several days and then went south to the Mexican coast, where on September 7, aided by the prestige of the rapid German advance in France and the utter defeat of the Russians at Tannenberg, she was allowed to ship a full load of coal. Meanwhile the British light cruiser *Newcastle* and armoured cruiser *Hampshire* were ordered to the coast of America from the China station, but the *Hampshire* was finally detained in Asiatic waters. The Japanese Navy began to exert increasing pressure on the Germans and to threaten Spee. The old battleship *Hizen*² and old armoured cruisers *Idzumo* and *Asama* were moving against him from the central Pacific and in the southern Pacific a very powerful Japanese squadron was searching for him.

The reaction of successful land operations on naval war was felt even in this far off quarter of the world, and the German victories eased the way for the German cruisers. Colliers were allowed to proceed to the Galapagos, a group in the eastern Pacific belonging to Ecuador, and the LEIPZIG

¹ *Times Documentary History*: iii., p. 236

² She was the Russian battleship *Retvisan*. See i., p. 213.

obtained enough fuel to permit her to cruise and sink a couple of British steamers. The effect of her operations was to stop sailings on the Peru coast, and the Peruvian Government, becoming anxious as to Peruvian trade, took steps to prevent her from obtaining more coal. Thus she was driven to Easter Island, Spee's point of concentration, as her captain knew that fuel would be available there. She was in touch with the light cruiser *DRESDEN* (24 knots, six 4.1-inch broadside) which had come round from the Atlantic after many adventures, coaling at secluded points in neutral territory. The *DRESDEN* had not had much luck and had destroyed only two British ships; a chase of the mail steamer *Ortega* off the west entrance of Magellan Straits resulted in the British vessel's escape through the fine conduct of her master, Captain D. Kinneir, who boldly pushed through the uncharted waters of Nelson Strait and thus got away. The *DRESDEN* also made for Easter Island.

Thus under that remote and mysterious island of the stone images whose origin none can explain, though perhaps they bear witness to the presence in the Pacific of forgotten races and cultures, from various oceans had gathered this squadron of German ships. Spee, with the armoured cruisers, the *NÜRNBERG* and four colliers or auxiliaries, anchored off the island in Cook Bay on October 12, where he was joined by the *DRESDEN* and *LEIPZIG* with three other colliers. That night four great fires blazed from the shore and Spee believed that his presence was being secretly signalled to the British, whose wireless signals could be indistinctly detected. He was wrong in that idea; a British archæological expedition was at the date in the island, but it knew nothing of the anxious search for him. He did not molest it and indeed chivalrously took steps to protect it against the natives who had shown some signs of hostility. On October 18 he left for Mars-a-Fuera, drawing near the Chilean coast and the success which the dispositions of the British Staff under Vice-Admiral Sir F. C. D. Sturdee¹ had prepared for him.

For there was now steadily approaching him a weak British squadron under Rear-Admiral Sir C. G. F. M. Cradock. It consisted of the old armoured cruisers *Good Hope* (22 knots, broadside two 9.2-inch and eight 6-inch guns) and *Monmouth* (22 knots, broadside nine 6-inch guns) with the light cruiser *Glasgow* (25 knots, broadside two 6-inch and five 4-inch guns) and the armed merchant ship

¹ Succeeded Admiral Sir H. B. Jackson, August 29, as Chief of the War Staff.

Otranto (17 knots, broadside three 4.7-inch guns, negligible fighting value). Its efficiency was low because the two armoured ships in it were manned with reservists and had only been fully mobilised on the outbreak of war. Their gunnery appliances, as was natural in old ships, were antiquated and they had received no gunnery training since the outbreak of war, beyond routine drills.

To send such vessels against the crack gunnery ships of the German Navy (for such the *SCHARNHORST* and *GNEISENAU* were) was an error which brought the most disastrous consequences. The Staff were using far more powerful and modern vessels as, for example, the *Black Prince* and *Australia*, for defensive duty, while giving Cradock in a post of extreme danger this miserable squadron. He was promised the more modern armoured cruiser *Defence* (23 knots, broadside four 9.2-inch and five 7.5-inch guns), a much more formidable vessel and one in permanent commission with a fully trained crew, but she never joined him. The old battleship *Canopus* was also despatched to his aid. There is a strong difference of opinion as to the value of such a slow and antiquated ship, acting with a cruiser squadron, but to the writer it seems that an old battleship could have rendered good service, though her proper sphere of employment was undoubtedly in the defensive work for which the *Australia* and *Black Prince* were being misapplied.¹

Cradock on September 14 was ordered by the Staff to "concentrate a squadron strong enough to meet *SCHARNHORST* and *GNEISENAU*, making Falkland Islands your base," and was told to keep the *Canopus* in company till the *Defence* arrived. When he had "superior force," he was ordered "according to information [to] search as far as Valparaiso northwards, destroy the German cruisers and break up German trade." On October 5 the Staff, knowing that *Spee* was nearing South America, that Cradock in the *Good Hope* was coaling at the Falklands, and that the *Defence* had not arrived, issued a calamitous order to him directing him to be "prepared to meet" the Germans, while the *Canopus*, *Monmouth*, *Glasgow* and *Otranto* were to "search and protect trade in combination." The *Canopus* at this date was in bad condition² and had to be left at the Falklands for repairs till October 23. Calculation on the part of the Staff would

¹ The Japanese Admiralty employed old battleships in this way.

² Her nominal speed was 17 knots (Commander C. C. Cartwright, in *Nautical Magazine*, civ, p. 18.) but her actual sea speed appears to have been only 12 knots. She was capable of 14 or 15 for short periods.

have shown the risk of despatching so small a force against Spee; it is an error in war to neglect facts or to assume that by some miracle on the part of subordinates, bad ships and old guns can be transformed. There had already been one plain warning to the Staff in the destruction of the *Pegasus* by the KÖNIGSBERG. On October 8 Cradock in a message to the Admiralty, which was not received till the 11th, stated his decision to concentrate at the Falklands and avoid division of forces. But the next step of the Staff was to render a catastrophe almost inevitable. On October 14 it ordered the *Defence* to Montevideo, a secondary point, to meet Spee in case he came round Cape Horn, while it approved Cradock's proposed concentration. Lord Fisher rightly regarded this diversion of the *Defence* from the point of real danger as a serious blunder.

On October 22 Cradock with the *Canopus* (which had rigged up a dummy third funnel) and *Good Hope* left the Falklands to join the *Monmouth*, *Glasgow* and *Otranto* which were already on the Chilean coast. From his secret base at the Chonos Islands on October 26 he sent the Admiralty a message which clearly indicated his decision to separate his other ships from the *Canopus*. He also by wireless called for the *Defence*, but his order to her was cancelled by the Admiralty Staff—a fresh and deplorable mistake. He was under no doubt as to the danger of his course. According to some statements, he believed he was going to certain death in obedience to foolish orders.

It was most unfortunate that in such circumstances he did not adopt a bold initiative and stand by his original wise decision to remain concentrated at the Falklands till reinforced. But he seems to have read a censure into one of the badly worded staff telegrams and he was a man of so high a courage that he was the last to shrink from a battle. Still the principles laid down by Napoleon¹ and Nelson remain eternally true. "Do not imagine," wrote Nelson in the Trafalgar campaign, "that I am one of those hot-brained people who fight at an immense disadvantage without an adequate object."² No admiration for an admiral who was among the most lion-hearted officers of his day, no sorrow for the loss of so gallant and noble a man, should obscure the truth, that the principles of war do not justify but

¹ "Des choes irréfléchis ne constituent pas la guerre." See also Napoleon's rule for the conduct of commanders-in-chief, in face of disastrous orders, i, p. 123.

² Clarke and McArthur, quoted by Corbett, *Campaign of Trafalgar*, p. 169.

most strongly condemn the fighting of such a battle as Coronel.

Without the *Defence* and leaving the *Canopus* far behind him, Cradock steamed up the Chilean coast, approaching Spee. Spee believed the *Good Hope*, *Monmouth* and *Glasgow* with an old battleship to be operating against him; his intention appears to have been to avoid an action¹ if he found the British concentrated but to attack them in detail if they were divided. He thought an old battleship would be too hard a nut for his armoured cruisers to crack. Cradock, by taking with him the slow and weak *Otranto* which was quite useless for the line of battle, played into his adversary's hands and sacrificed the approximate equality in speed which he possessed without her.²

Very early in the morning of November 1 Spee learnt from a German steamer that the *Glasgow* had been in Coronel the previous evening and was about to put to sea. Before day-break he was in movement with the armoured cruisers, NÜRNBERG, LEIPZIG and DRESDEN, to cut her off, while Cradock with the *Good Hope*, *Monmouth*, and *Otranto* was steaming to join her. A heavy sea was running as the cold south wind blew, and far away to the east the summits of the Andes loomed white with their eternal snows. At 2 p.m. Cradock, having joined the *Glasgow*, signalled to his ships that by wireless indications a German vessel was north of them. The squadron spread on a line of bearing, with the *Glasgow* on the extreme north-east, succeeded by the *Otranto*, *Monmouth* and *Good Hope*, which was furthest to the south-west. The *Canopus* was about 300 miles astern.

At 4.30 (British time)³ the LEIPZIG sighted strange ships and the two forces steered towards one another. The British ships closed on the *Good Hope*. The Germans were working up to full speed from 14 knots at which they had previously been steaming. The force of the wind which blew strong from the south-east was Six, and a great swell shot water and spray right over the labouring ships. Spee, at a conference of captains on October 18 had decided that if there were a heavy sea the big ships should fight at 7,700 to 8,300 yards range; if the weather were good, the Germans

¹ See Spee's letter, *Times Documentary History of the War*, iv, p. 11.

² The German Official History regards Cradock's armoured cruisers as equal in speed to the German, (*Kreuzerkrieg*, i, p. 220). The *Monmouth* was at most half-a-knot slower than Spee's ships, which do not seem to have exceeded 20 knots.

³ This was thirty minutes in advance of German time. (*Kreuzerkrieg*, i, p. 200.)

were to open the range yet more; they were to close in when their fire told. The rôle of the light cruisers was carefully considered and settled. As far as good staff work and thorough tactical preparation could help, the Germans neglected no step to gain victory. There is no record of any conference on the British part or of any orders having been issued to the *Glasgow* and *Otranto*¹ regarding their tactics.

At 5.47 p.m. the British formed line ahead composed of the *Good Hope*, *Monmouth*, *Glasgow* and *Otranto* in that order. The Germans also formed line ahead with the *SCHARNHORST* and *GNEISENAU* leading. Both were heading south at about 17 knots (the *Otranto's* maximum pace) but the Germans were going faster. Cradock, when the hopeless odds against him must have been evident, tried to close, as at that time the sun would have been in the German gunners' eyes. Spee did not mean to engage till the sun had set, and because his opponent was so inferior in speed, owing to the retention of the *Otranto*, the German Admiral could decide what the range should be, when battle was to be joined, and who should have the wind gauge which is still important from its influence on shooting. The gunner with the wind in his face as Cradock's men had it, is hampered by the enemy's smoke, and finds the glass of his telescope dimmed by spray. Spee edged away and avoided immediate battle.

No idea of postponing action till he had rejoined the *Canopus* and concentrated his force appears to have occurred to Cradock. He did not act as did Hipper at the battle of Jutland, when he led the British cruiser force towards the German Battle Fleet. That he would fall back on the battleship with his cruisers was, however, the expectation of the British Admiralty.² Spee kept between the British and the land to cut off escape to neutral waters. At 7.0 p.m. (British time) the two lines of battle steering on slightly convergent courses with the general direction south to south-south-east, drew within extreme range. The sun sank against a crimson sky behind the British, showing up their hulls as they pitched in the heavy sea; the German ships were obscured against the eastern sky across which scudded dark clouds, and rain squalls hiding from time to time the moon. The night was certain to be a wicked one, and the weather conditions were

¹ At the opening of the action the *Good Hope* made a signal to the *Otranto* which could not be read. (Spencer-Cooper, p. 57.)

² Churchill, i, pp. 414-5.

such as to enhance the advantage the Germans possessed in training and in weight of metal.

At 7.03 the German squadron opened fire at a range of over 11,000 yards, taking up targets by the left, which meant that the *SCHARNHORST* fired at the *Good Hope* and the *GNEISENAU* at the *Monmouth*. The German light cruisers *LEIPZIG* and *DRESDEN* were far astern of the armoured ships and the *NÜRNBERG* had not been able to get into line. The shooting of the light cruisers was of trifling importance as those vessels tossed so violently in the great seas that they could do one another little harm at long range. At the third salvo the famous gunners of the *SCHARNHORST* began to hit the *Good Hope* and it was the belief of German officers that they damaged or disabled her main fire control before she so much as discharged a shot in reply. She opened about 7.05. From the time when the Germans began to hit they discharged a salvo every fifteen seconds (probably from half the heavy guns on the broadside.¹) In the *Good Hope* salvos were fired at fifty seconds interval and no complete salvos of all the broadside guns were observed. The Germans were shooting three times as fast as the British.

In the German ships all the heavy guns (six 8.2-inch and three 6-inch) could be worked notwithstanding the high seas. In the British ships it is morally certain that the main deck guns (four 6-inch in the *Good Hope* and three 6-inch in the *Monmouth*) were unable to fire owing to the bad weather conditions and the unsatisfactory tactical situation in which the gunners had been placed. The British squadron was already in a desperate position. The Germans comment unfavourably on the numerous flag hoists which were made for signals as contrasted with their own hoists of single flags, but this was a matter which had no influence on the action. The only reasonable course in the circumstances was for the British units to scatter and attempt to rejoin the *Canopus*, breaking off the battle and sacrificing the *Otranto* if she could not slip away in the darkness. It was not taken, and very speedily the two British armoured cruisers were overwhelmed.

Early in the short action the *Good Hope* received a heavy hit on her forward 9.2-inch gun and a great sheet of flame rose from her hull, indicating a bad cordite fire. The forward heavy gun was not again discharged. About 7.40 *Spee* reduced speed to 12 knots and shortened the range. It fell to 10,200 yards and the battle became target practice

¹ i.e. three 8.2-inch and three 6-inch.

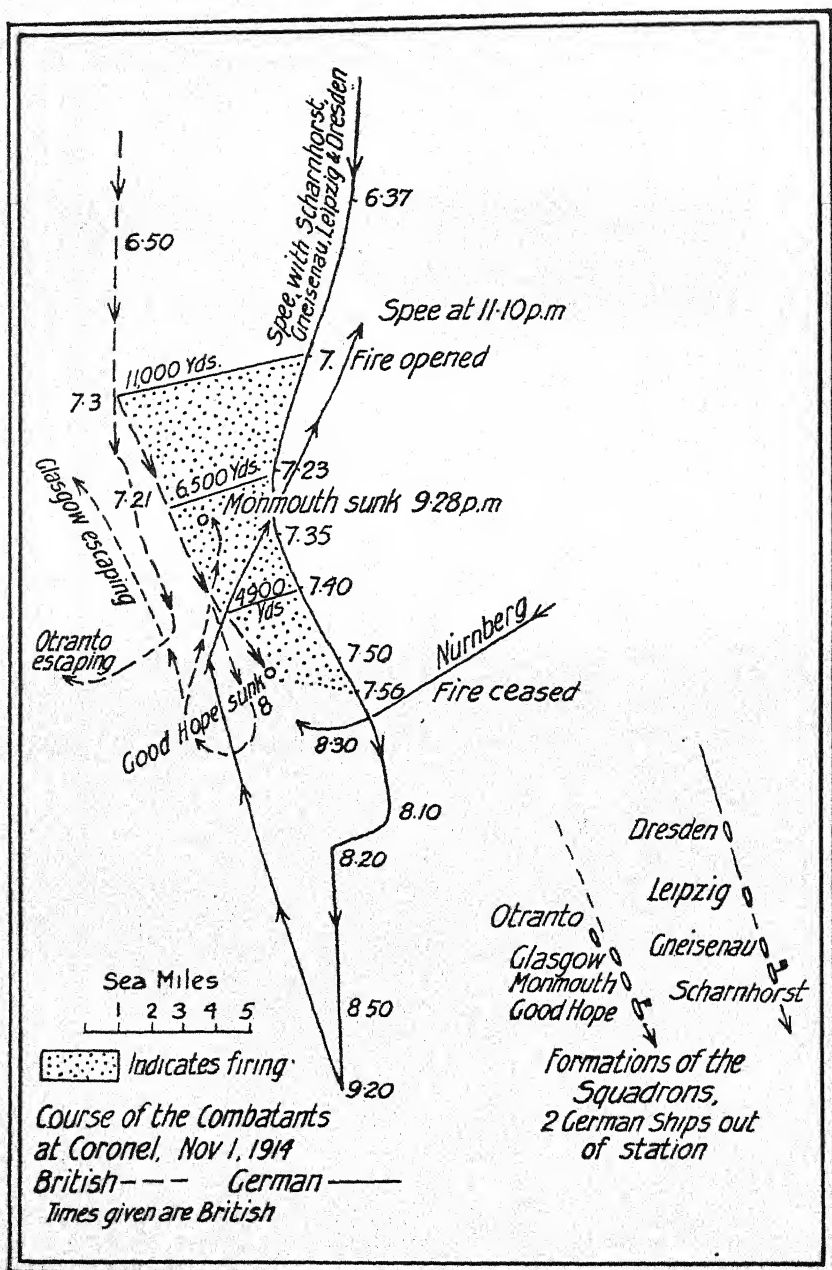
for the Germans. The *SCHARNHORST* at the outset employed common shells and then used armour-piercing shell for her heavy guns; the *GNEISENAU* at the outset used armour-piercing projectiles. As the range fell, the 6-inch guns in the German ships fired common shell. One of the *GNEISENAU*'s earliest hits was on the roof of the *Monmouth*'s fore-turret; there was a terrific explosion; a sheet of flame spouted from the turret as though it had been a cauldron of fire; and the whole turret vanished.

At 7.50 as the range sank to less than 8,000 yards, a heavy shell struck the *Good Hope* between the second and third funnels when there shot up from her a pillar of flame to a height greater than her masts and 70 to 90 feet broad. It looked as Spee said, after witnessing that awful sight, "like a tremendous firework display against the dark sky." The range was shortened more and more; but the *Good Hope* still floated and her heroic crew still fought on their hopeless fight. For some minutes the Germans fired into her at 5,000 yards. Then in the darkness she vanished; the glow of the great fires that burnt in her disappeared, extinguished by the waves; and Spee at 7.56 sheered off, believing that she was attempting to close and use the torpedo. About that very time she must have foundered, taking with her a British admiral and nearly a thousand men to the depth of the sea till the day when it gives up its dead.

The fate of the *Monmouth* was as deplorable. At 7.40 with a great fire burning in her fore-castle and torn every quarter of a minute by a German salvo she stood out of the line of battle, down by the stern, but still firing. She discharged occasional shots till 7.50 when she wholly ceased her fire and the *GNEISENAU*'s guns were directed upon the *Good Hope*. The *Monmouth* meantime disappeared in the night. As for the *Otranto*, though she received no orders,¹ she drew westwards out of the line of battle early in the engagement and made her escape. The *Glasgow* also received no orders from Cradock,² even when the position of the squadron was desperate. A very heavy fire was directed against her and she was fortunate to get off as she did with five hits, all on the water-line, which her coal bunkers stopped, though one 4.1-inch high explosive shell did extensive damage. She ceased fire at 8 p.m. and steamed westwards; and she

¹ Commander Cartwright, in the *Nautical Magazine*, states that she was ordered to keep off at the beginning of the action.

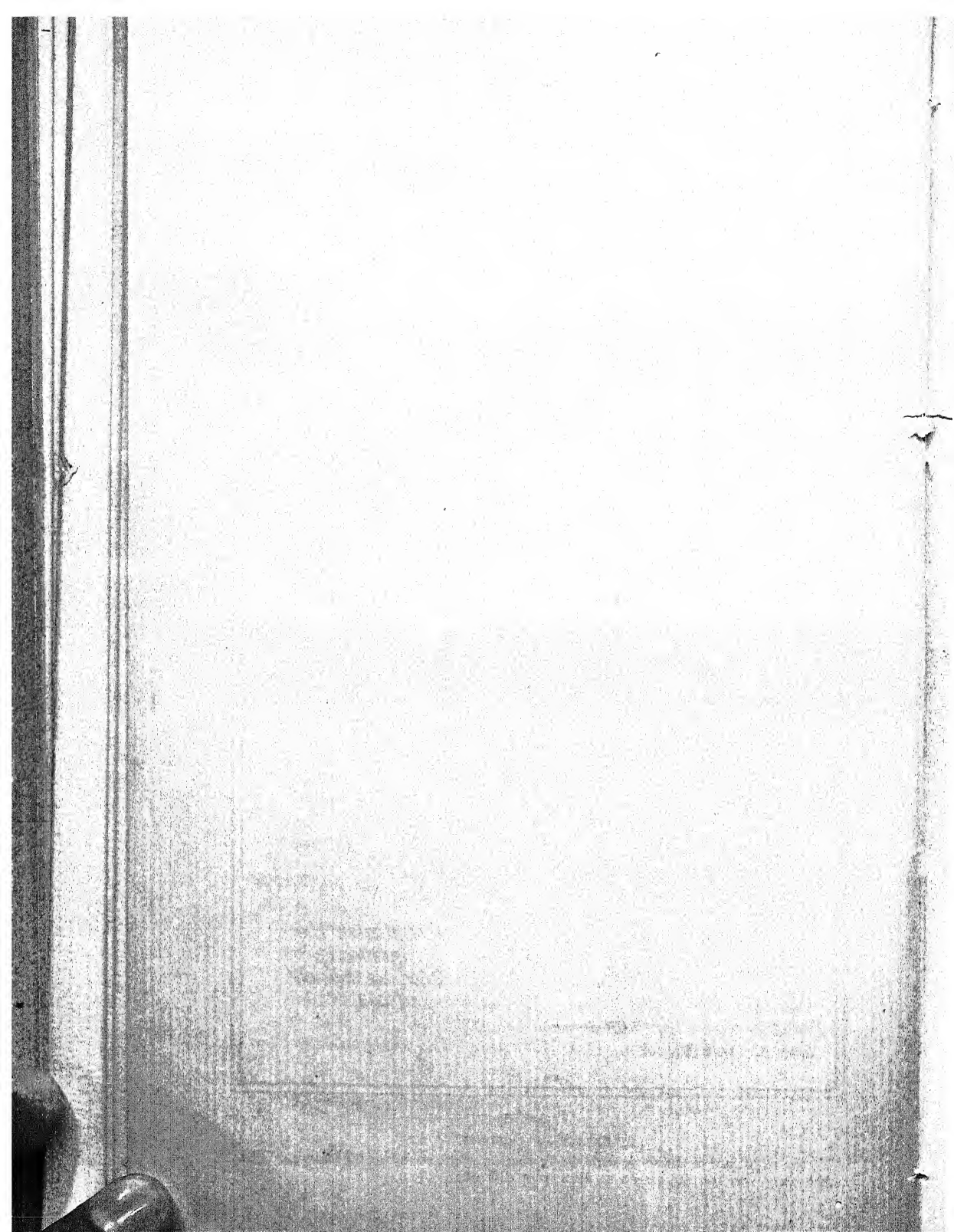
² It is possible that he had already fallen.



PLAN 25

BATTLE OF CORONEL

To the right, not in the same scale the formation of the squadrons is shown. The Nürnberg was too far astern to appear in this plan.



also escaped. Had she remained, her destruction was morally certain and the blow dealt by Spee would have been even more disastrous. Her captain showed a sound judgment in refusing to immolate his ship and crew.

The luckless *Monmouth* was sighted by the NÜRNBERG, which had been far to Spee's rear during the action, and was consequently to the north of the combatants. The *Monmouth* endeavoured to get away by turning round and running north. About 9 p.m. the NÜRNBERG came upon a damaged vessel with a heavy list to port, and obtaining no answer to the German recognition signal, closed her at 9.20 and after an attempt to secure her surrender, opened fire, gradually shortening the range to 6,600 yards. A torpedo discharged by the German ship missed. The British ship made a gallant effort to circle and bring her starboard battery into action, but the shells of the NÜRNBERG tore her side open, and at 9.28, with the British flag still flying, she capsized and sank.

The Germans heard the British gun-crews being piped to their guns, and thus we know that among the old reservists in that dying ship, fighting an entirely hopeless battle, discipline was faithfully maintained unto the very end. Not a soul from her was saved owing to the mountainous seas, and the German belief that other British vessels were near. The *Glasgow's* officers acquitted the German Navy of any charge of inhumanity;¹ until an enemy squadron is completely disposed of attention cannot be given to saving life; and the same principle a few weeks later was to doom many of these very German crews to death. During the night nothing more was seen of any British ships, and when day broke on November 2, no foe was in sight of Spee, who signalled to his squadron: "With God's help a splendid victory has been won for which I thank and congratulate the crews."

The German ships were scarcely scratched. The *Scharnhorst* was only hit twice, by a 4-inch shell from the *Glasgow* and a 12-pounder shell from the *Good Hope*, so that the British 9.2-inch and 6-inch guns in the latter ship fired without making a single hit. In three places the plating of the German cruiser was slightly dented, probably by splinters from shells that fell short, and her wireless was slightly damaged. She had not a man touched. The GNEISENAU had

¹ There is some dispute on the point, but this was the opinion given to the writer by one of the *Glasgow's* officers.

four hits and had 2 men slightly wounded. The only hit of any importance was one on the 8.2-inch after turret at the junction with the barbette, which jammed the turret for some minutes and caused a fire. A hit on the starboard side above the armour also caused a fire.

The number of hits counted on the *Good Hope* by the German spotting officers was thirty to forty. From her 8.2-inch guns the SCHARNHORST discharged 188 common and 234 armour piercing shell and from her 6-inch guns 148 common and 67 armour piercing—a total in all of 637 rounds. The GNEISENAU fired 244 armour-piercing 8.2-inch shell and 198 6-inch common shell; and probably some few of the hits on the *Good Hope* were hers, as she joined in the destruction of the British flagship towards the close of the action. The ratio of hits to shots fired was thus about five per cent., a high figure for such conditions as prevailed that evening. The LEIPZIG fired 407, the DRESDEN 102 and the NÜRNBERG 135 4.1-inch shells, all armour piercing.

The figures of the action were as follows for warships engaged:

GERMANS. Complete victory about fifty minutes from fire opening.						
Ships.	Tons.	Rounds		Hits on.	Killed.	Wounded.
		Fired.				Broad-side.
Scharnhorst	11,420	637	2	0	0	1,953 lb.
Gneisenau ..	11,420	442	4	0	2	1,953 „
Leipzig ..	3,200	407	0	0	0	175 „
Dresden ..	3,592	102	0	0	0	210 „
Nürnberg ..	3,396	135	0	0	0	175 „
Total ..	33,028	1,723	6	0	2	4,466 „
BRITISH.						
Good Hope	14,100	?	30-40	919	0	1,560 ¹ „
Monmouth..	9,800	?	20?	735	0	900 ² „
Glasgow ..	4,820	?	5	0	0 ³	355 „
Total ..	28,720		60?	1654	0	2,715 „

The frightful cost of mistaken strategy and tactics at sea stands out from these figures. There was no compensation for the sacrifice of 1,654 men. No damage, no loss was inflicted on the Germans. The injury to the reputation of the British Navy, when it became known that the German

¹ Actual broadside in heavy weather 1,160 lb.

² Actual broadside in heavy weather 600 lb.

³ *Nautical Magazine*, civ., 18, states that she sustained "some casualties" but the exact number is nowhere disclosed.

ships had escaped so lightly and destroyed their antagonists with such almost incredible ease, was severe, and the suspension of British commerce in the southern parts of South America complete. Had Spee followed up his success, as it seems that he might have done, and searched for the *Canopus*, *Glasgow* and *Otranto*, he could have added to his laurels. The *Glasgow*, from her high speed, might have been certain of escape, but the *Canopus* left alone should have been an immediate victim to torpedo attack.

The destruction of the British ships was due to grave defects in material and personnel. The odds against them, allowing for the main deck guns which could not be fought, were initially over two to one; and so far as the writer knows not even Nelson ever invited or forced battle with such chances against him. They were such as one of the wisest writers on war, Clausewitz, considered certain to give success to the superior force. The armour of the two British ships, which were four or five years older in construction, was naturally inferior in protective quality, and both were poorly armed for their size—they were built in reply to French or Russian cruisers. Their defects were enhanced by a slow rate of fire. In Nelson's days the British seamen fired three shots to their opponents' one. In this battle by the uncontradicted evidence of the German Official History, the Germans fired three shots to the British one. That fact alone would explain the result.

The original British inferiority in gun power was aggravated by this excessive slowness of fire—a fault that was marked in some of the British ships at Jutland and was there also perhaps the cause of British disasters. No doubt the spray on the telescopic sights and the smoke and bad light contributed to the failure of the British shooting, but these again were due to errors in the British tactical methods which ought not to be overlooked. The German armoured cruisers were both crack gunnery ships, and each in turn had held the cup for the best shooting in the German Navy, though it must be remembered that in June, 1914, half their crews had been relieved and replaced. To send against such ships a pair of inferior, antiquated British armoured cruisers, with out-of-date gunnery appliances, manned by mobilised men, many of them naval reservists with a sketchy training, was simply courting disaster.

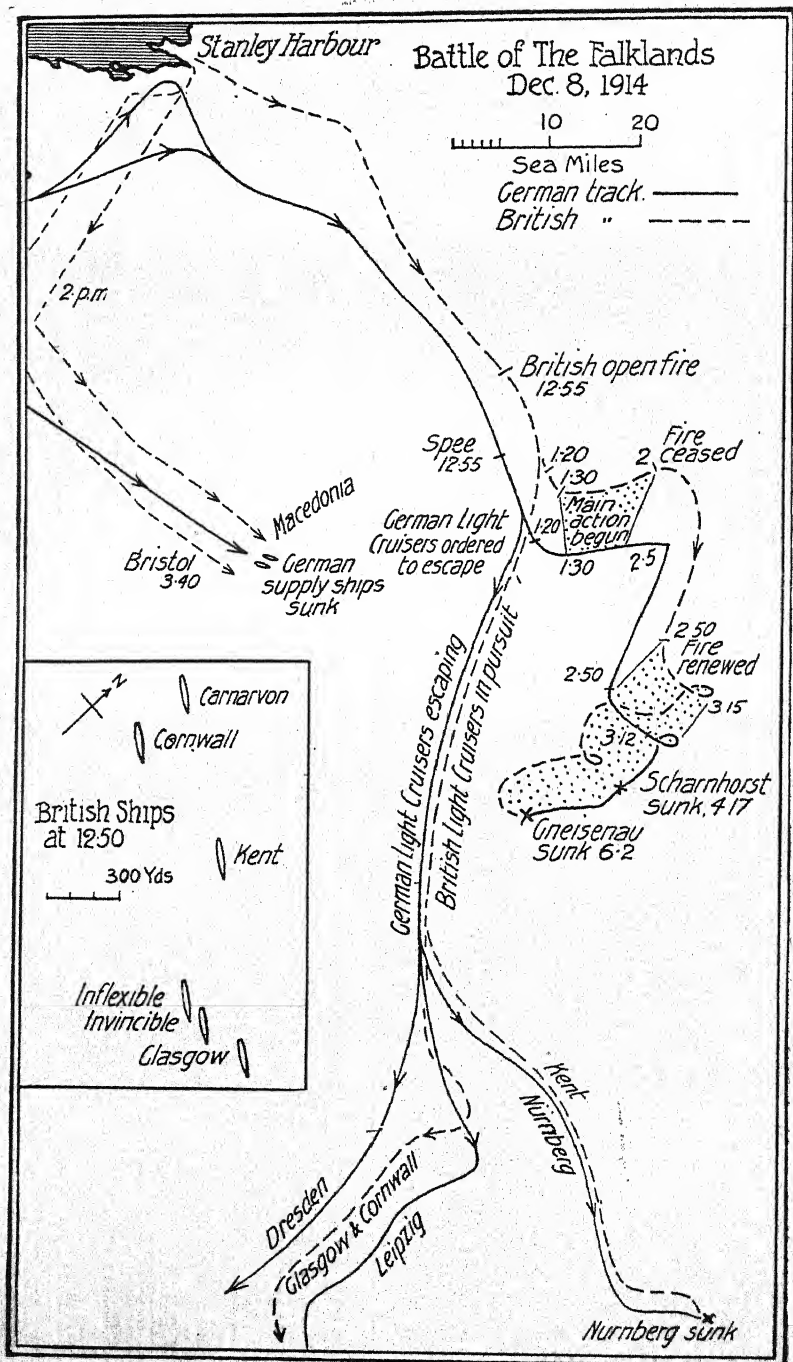
Thus the unfavourable odds were increased by defective Staff work at Whitehall, by the absence of a resolute initiative

on the part of the British squadron commander, and by unsatisfactory tactics and gunnery in the actual engagement. It will remain a standing example of the principle that, while the offensive in war is sound policy, for the weaker of two combatants to challenge battle with the odds so heavily against him spells suicide when the enemy is of good quality. Cradock, no doubt, hoped to inflict on the Germans enough damage to stop their career of mischief, even at the price of his own destruction. But as has been previously pointed out, the history of naval war shows that such "useful defeats" hardly ever occur. When he obeyed the ill-conceived order to search for and engage the Germans, he disobeyed the order to keep his squadron concentrated.

A further defect in the British ships which was brought out by the action was the extreme inflammability of their ammunition and the want of adequate protection against the flash of shells. In both cruisers there were bad ammunition fires and explosions. Unfortunately, nothing was done to deal with this danger and it was permitted to continue until Jutland, though the action at the Dogger Bank once more showed its danger. In the same way no alteration was made in the arrangements which contributed to the slowness of fire at Coronel. The guns were certainly not at fault.¹ The writer saw the operations of loading and firing carried out with 9.2-inch weapons in a sister of the *Good Hope* twenty years ago three times or more a minute.

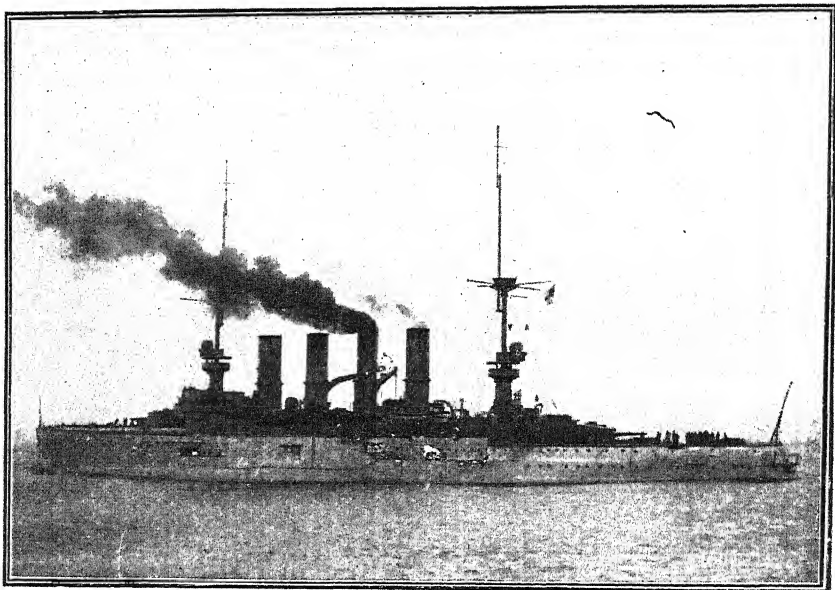
German critics of the battle have expressed surprise that Cradock did not keep his force concentrated and make a more determined effort to force close action when the sun was still up and behind his ships and the gunnery conditions for his men were more favourable. A British estimate prepared by the Staff and nominally approved by Fisher and Sir A. K. Wilson declared that "the squadron was amply strong enough to defeat the enemy, if attacked by them," and that "it was not possible at that time to provide another strong fast ship at that particular point." But both statements are open to challenge and Lord Fisher in private blamed the Staff for giving Cradock such orders and such a squadron. The Admiralty exonerated Cradock for fighting in the circumstances and announced that his decision "was inspired by the highest devotion and in harmony with the spirit and traditions of the British Navy." That in essence is the ver-

¹ Bad visibility undoubtedly contributed; the British gunners in the *Glasgow* could scarcely see the Germans.



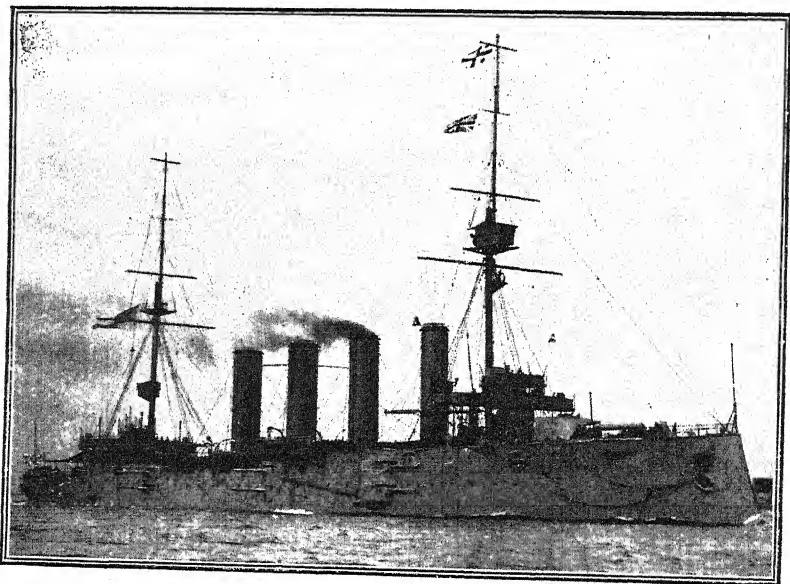
PLAN 26

The shaded sections indicate that firing was in progress. In the small diagram in the left positions are only approximate.

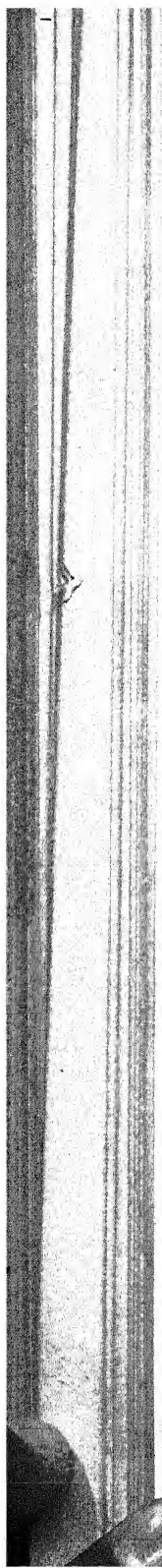


THE GERMAN ARMoured CRUISER "SCHARNHORST"

She was one of the latest and best of the armoured cruiser class, obsolescent when the war with Germany began. She carried Spee's flag and was famous for her gunnery. Fought almost unscratched at Coronel and was sunk with all in her at the battle of the Falklands.



THE BRITISH-ARMoured CRUISER "GOOD HOPE," SUNK AT CORONEL. She was earlier and weaker in armament than the Scharnhorst, and was manned with reservists who were weak in gunnery. Fighting to the last as Admiral Craighero's flagship, she went down with all on board.



dict of the French Admiral Daveluy, who also dwells on the failure to concentrate the British squadron and severely censures the Admiralty for sending such a collection of old ships against an antagonist of the calibre of Spee.

The *Glasgow*, *Canopus*, and *Otranto* as it turned out were able to effect their retreat from that ocean of disaster. Spee found that his victory had eased many of his difficulties of coal supply, while the British discovered that their difficulties were correspondingly increased. Neutrals do not admire or respect an unsuccessful combatant. Fortunately the management of the sea war had at this juncture passed into the strong hands of Lord Fisher, who on October 29 succeeded Prince Louis of Battenberg as First Sea Lord, and at once replaced Sturdee as Chief of the War Staff by Rear-Admiral H. F. Oliver. To avoid reviving the old feuds which had weakened the Navy, Fisher decided to send Sturdee in command of a squadron to deal with Spee and to give him two battle cruisers, the *Invincible* (flag) and *Inflexible*.

The order for them to get ready was despatched to the Grand Fleet on November 4; and on November 10 Fisher called for yet another battle cruiser, the *Princess Royal*, to meet the risk of Spee coming through the Panama Canal and defeat him if he did. The battle cruiser force in the North Sea thus fell to three effective ships, *Lion*, *Queen Mary* and *New Zealand*, for the *Tiger* was not yet ready for action, against the German SEYDLITZ, DERFFLINGER, MOLTKE and VON DER TANN. The danger incurred was great and it caused Fisher the intensest anxiety. As he said to the writer, in those days he literally sweated blood. With furious energy, admirably backed by Mr. Churchill, he hurried forward work on the *Invincible* and *Inflexible* in Devonport dockyard, and when it was proposed that the ships should sail on Friday, November 13, immediately ordered them to leave not later than the 11th. Because in the first instance adequate force had not been employed against Spee, now it was necessary to detail no fewer than twenty-one armoured and nine or ten unarmoured ships to cope with him.

In complete secrecy the battle cruisers moved. The press censorship and the remoteness of Scapa Flow enabled such strokes to be carried out with the minimum of risk. Constant reports were in circulation that a German battle cruiser either had broken out into the Atlantic or was about to do so and these added to Fisher's burden of cares. The German

Staff considered such a movement, but decided against it on account of difficulties of coal supply. Fisher meantime took steps to correct the dispositions which had sent off the powerful second-line units *Black Prince* and *Duke of Edinburgh* to do escort work in the Red Sea and had told off the even more powerful *Warrior* to act as guardship at Alexandria.

The *Inflexible* and *Invincible* reached the Cape Verde Islands on November 17 and coaled there; they reached the Abrolhos Rocks (on the Brazilian coast, midway between Bahia and Rio) on November 26, and there Sturdee received orders to steam to the Falklands preparatory to a search of the Chilean coast for his enemy. Elaborate dispositions had been made to drive Spee into his arms. The *Australia*, with various Japanese ships, was coming south from the Galapagos; the 1st Japanese South Sea Squadron (armoured cruisers *Kurama*, *Tsukuba*, *Ikoma*, each four 12-inch and powerful smaller guns on the broadside) was moving east in the central Pacific. At the Abrolhos Rocks Sturdee met the *Defence*, *Carnarvon*, *Cornwall* and *Kent* armoured cruisers, the *Glasgow* and *Bristol*, light cruisers and the armed ship *Orama*. Some delay was caused by the transfer of special long-range wireless gear from the *Defence* to the *Invincible* to enable the Admiralty, through a repeating ship, the *Vindictive*, to maintain wireless touch with Sturdee, and then the *Defence* was despatched to the Cape.

On the 28th Sturdee left and next day was seriously delayed by the *Invincible* fouling her propeller with a towing wire during target practice.¹ A day was lost through this misadventure. On December 7 he reached Port Stanley in the Falklands, and found the *Canopus* there, so placed on the mud that she could not be sunk by hostile fire but could be used as a battery for coast defence. The urgent business was to coal the all-important battle cruisers, yet they were not given the first place on the roster; the *Carnarvon*, *Bristol* and *Glasgow* were ordered to coal before them from the only three colliers that had arrived, and the *Bristol* opened up her machinery for repairs. Early in the morning of December 8th, a collier was available for the *Invincible*, and she began to coal; about the same time another collier arrived and the *Inflexible* also began coaling. The *Carnarvon* and *Kent* (which latter ship had not coaled) alone were ready for action; the *Cornwall* and *Macedonia* (armed ship) had not begun to coal; the *Bristol* had her fires out; and the *Glasgow*

¹ Verner, p. 50.

was repairing machinery, when at 7.50 a.m. the signal station reported two strange warships approaching from the south.

Spee anchored at Mas-a-Fuera, on November 6, after paying a short visit to Valparaiso, and then steamed south, capturing on his way a British steamer and documents on board her which her captain had failed to destroy, showing the secret British coaling stations. On November 26 he left a secret base on the Chilean coast in the Gulf of Penas after coaling and equalising the ammunition in the two armoured cruisers, which gave them 445 rounds each of 8.2-inch ammunition and 1,100 of 6-inch. He had with him three supply or hospital ships; a fourth auxiliary was sent to Punta Arenas in Magellan Straits; and a fifth to Callao; while the armed ship EITEL FRIEDRICH was instructed to keep up a steady flow of wireless signals near Mas-a-Fuera, to give the idea that Spee's force was there. From the German Staff Spee learnt on November 3 that the British held the Atlantic trade routes with strong force, so that cruiser operations there were only possible for groups. Cruiser operations in the Pacific were regarded as unpromising. All German forces were to concentrate and try to break back to the North Sea. A secret base was prepared west of Iceland.

Spee therefore issued orders to the various German agents for the concentration of coal at bases on the eastern coast of South America. No warning of Sturdee's approach reached him. There were reports on the contrary that the British forces had left the Falklands for South Africa. No wireless signals from British ships were observed. Sturdee was maintaining a strict and masterful wireless discipline. Spee decided to destroy the British base at the Falklands, to seize the fuel that was there, and secure the Governor as a hostage for the German Governor of Samoa who had been imprisoned by the British. On December 2, the Canadian sailing vessel *Drummuir* with a cargo of 2,750 tons of Cardiff coal was captured off the Horn and taken into a desolate base in Tierra del Fuego where the fuel was transferred to the German ships, but the process occupied several days and not until December 6 was Spee able to move. Chance had delayed him by exactly the time which his antagonist required to reach the point of action.

Of the German officers several, including Captain Maerker of the GNEISENAU, thought it would be wiser to avoid the Falklands, but Spee was quite firm in his decision to attack

them, which was a piece of signal rashness. The GNEISENAU and NÜRNBERG were to open the attack. Owing to errors in the German reckoning, the two ships were an hour late in approaching Stanley Harbour, so that tactical mistakes were piled on a strategic blunder. At 8.30 a.m. of December 8 they could see the low hills which border the harbour to the south, and smoke rising; then, as they closed, the smoke became thicker and thicker till a black fog overhung the whole port. This caused them no alarm; they ascribed it to the destruction of their depôts by the British, precisely as a few weeks before the French had destroyed the fuel at Papeete. At 9 a.m. the German look-outs reported warships for certain in the harbour, and some officers thought they made out tripod masts, the sure sign of battle cruisers at this date. Maerker, however, did not see tripods; he thought there were only four vessels of old battleship and armoured cruiser type with a couple of light cruisers, and so he steamed quietly towards the hornet's nest.

At 9.25 a.m. as the GNEISENAU drew within range two pillars of water rose from the surface of the sea and the boom of heavy guns came from within the harbour. The *Canopus* had opened fire. Maerker was preparing to reply when Spee signalled to him to avoid action and proceed north-east at high speed, raising steam in all boilers. Spee must have had an inkling of what was coming as he detached his supply ships and his hospital ship, the SEYDLITZ. At 10 a.m. tripod masts were definitely made out by the Germans moving seaward in the harbour. They did not realise that they had caught their British antagonists unready and at a most signal disadvantage, and they had therefore no course but flight.

Sturdee on reaching the Falklands had arranged plans, which apparently provided that the two battle cruisers with the slow *Carnarvon* should deal with the two German armoured cruisers while the rest of the British force (armoured cruisers *Kent* and *Cornwall* and light cruisers *Glasgow* and *Bristol*) disposed of Spee's three light cruisers. At 8.14 a.m. Sturdee signalled to his ships to prepare to weigh. There were some moments of anxiety lest the Germans should boldly attack the British ships at the entrance to the port before the main force could get out, but about 9.30 the Germans turned away and the British began to stream out in chase. Seen after 10 both battle cruisers were clear of the harbour. The visibility was extraordinary; the sea was moderate and brilliantly blue and the wind was light from the north-west.

1914] BATTLE OF FALKLANDS JOINED

Half an hour later the signal was made for a general chase which means that each ship is free to do her best to get up with the antagonist. The *Glasgow* as the fastest ship, was ordered to keep touch with the Germans. It took some time for the battle cruisers to work up to full speed, and as Spee was nineteen miles away, the British, going 24 knots to his 18, could not expect to be within range for some time. At 10.48 the speed of the battle cruisers was eased owing to the amount of smoke. About 11.10 Sturdee signalled to the *Inflexible*, which was ordered to take station on his starboard quarter, that he had reduced speed to 19 knots; at 11.26 he ordered a speed of 20 knots for the whole squadron, which order caused some surprise. It was contrary to Nelson's and Fisher's great principle, "lose not an hour."¹ About the same time he ordered the *Bristol* and *Macedonia* to "destroy the transports" (or the three auxiliaries) which Spee had detached. The crews in both squadrons had dinner during this interval and the British changed from their grimy coaling rig.

At 12.50 Sturdee quickened and worked up to 25 knots and ordered the *Inflexible* to open out her distance on the *Invincible's* quarter to 1,000 yards and engage. She fired the first shot of the day from the fore 12-inch turret at the LEIPZIG at 16,000 yards. The *Invincible* fired a few rounds at the same ship which shortly after turned off south with the other German light cruisers on an order from Spee at 1.20 to scatter and fly. The *Kent*, *Cornwall*, and *Glasgow* went after them in pursuit. Spee himself decided to fight with his two big cruisers, seeing escape was out of the question. The *SCHARNHORST* for some minutes took the rearward station, which was the post of honour, and altered course from south-east to north-east, so that the German gunners might not be troubled by the smoke from their ships' funnels.

At 1.30 the battle began. For the British 12-inch guns extreme range was 16,500-17,000 yards and effective range 12,000-14,000. In the two German ships the fore and aft turrets with their two 8.2-inch guns apiece had an extreme range of 16,500 yards; the 6-inch casemates, of 15,000 and the two 8.2-inch casemates on each broadside in each ship, of 13,500 yards. The Germans were everywhere vulnerable to attack by the 12-inch gun; the British battle cruisers had

¹ Which is Napoleon's principle, "activité, activité, vitesse." *Correspondance* xviii, No. 15,087.

armour proof at 14,000 yards against the 8.2-inch shell and at closer range to the 6-inch shell.

Sturdee decided against closing immediately to decisive range, where the expenditure of ammunition would be small and swift victory should have been certain. His reasons were desire to avoid even small injury to his battle cruisers and the high reputation of his two antagonists for gunnery. In fighting at extreme range there would be no risk of damage to his ships but the expenditure of ammunition would almost certainly be enormous.¹ The *Invincible* at the outset fired at the GNEISENAU and the *Inflexible* at the SCHARNHORST, exchanging targets when the German ships altered their positions. Spee's gunners at the third salvo hit the *Invincible* (at 1.44). The range sank to 12,200 yards and the German 6-inch guns joined in whereupon Sturdee increased the distance first to over 16,000 yards and then drew out of range when about 2 p.m. both sides ceased fire. Spee turned sharply south making for waters where fogs, squalls and bad weather were to be expected, in a last effort to extricate his ships. In this initial firing the British shooting had been poor; only two hits had been inflicted on the GNEISENAU and about as many on the SCHARNHORST, and neither ship was badly damaged. The destructive power of the British 12-inch shell proved much less than might have been anticipated.

About 2.50 p.m. the British once more closed to 16,500 yards and reopened fire. The engagement became hot; the range sank to 12,000 yards though Sturdee did not permit it to fall lower, so as to prevent the Germans from using their medium guns effectively. Hits on the German vessels multiplied. The GNEISENAU, which in the first period had lost only 1 killed and 10 wounded, now suffered severely. Her whole hull trembled under the shock of the heavy British projectiles and fires broke out in many parts of the ship. She had a list to port. The SCHARNHORST was also on fire badly. The sheets of water which flew up when the British shells missed and struck the sea, blew in through the wounds in the sides of the German vessels and prevented the flames from getting a firm hold. The British shooting would have been better had the *Inflexible* not been kept by Sturdee steaming in the *Invincible's* dense funnel smoke. About 3.15 the *Inflexible* took the lead for some minutes and

¹ At Jutland the Germans were able, however, to destroy large ships of their own class with a very moderate expenditure of ammunition at long range.

fired better, as Sturdee turned sharply to port, but he soon turned back and she was as badly handicapped as ever with serious waste of her valuable ammunition. At 3.27 the range dropped to 12,000 yards and the SCHARNHORST was visibly *in extremis*, down 3 feet in the water, with great fires raging, but none the less using her guns gallantly and vigorously.

The British were impressed by the steadiness of the German crews and by the regularity and rapidity of their salvoes. At 4 p.m., Spee who had previously signalled to Maerker in the heat of the battle that Maerker had been right in his advice against the plan of attacking the Falklands, flashed an order to the GNEISENAU to escape if she could. He then turned his flagship towards the British probably with the object of using his torpedoes. Only one of the SCHARNHORST's four funnels remained upright; she had a heavy and increasing list to port; and her stern was ablaze. At 4.4 she fired a last shot from her fore turret and then turned very gently over, with her flag still flying, lay on her beam ends for a perceptible interval with screws revolving, and finally vanished bows foremost. As the battle continued, the three British cruisers *Invincible*, *Inflexible* and *Carnarvon* could not save her men; they were far from the spot where she had vanished and the water was so intensely cold that little could have been done even had there not been the GNEISENAU to deal with. We may regret that the *Carnarvon* was not told off to attempt that little for so gallant an antagonist; but it is the law of naval war first to destroy the enemy and only then to save life. And thus it was that from the SCHARNHORST not a soul escaped.

The end of the GNEISENAU was delayed some time in the leisurely target practice to which Sturdee subjected her. At intervals the *Carnarvon* fired at her as well as the two battle cruisers, and at 4.45, probably by a shell from the armoured cruiser, her steering gear was disabled so that she circled under a hail of projectiles. Her resistance to the terrific fire to which she was subjected was nothing less than extraordinary, and it is specially to be noted that in neither of the German armoured cruisers were there the ammunition explosions which had occurred in Cradock's ships. About 5.30 she lay a wreck on the water, most of her stokeholds flooded, all her guns but one useless, her ammunition nearly exhausted, great fires raging, and only about 300 or 350 of her crew left alive. The British fire ceased and the British ships closed slowly but cautiously, as she still flew the German flag and had at 5.25 fired a torpedo. At 5.40 the living were

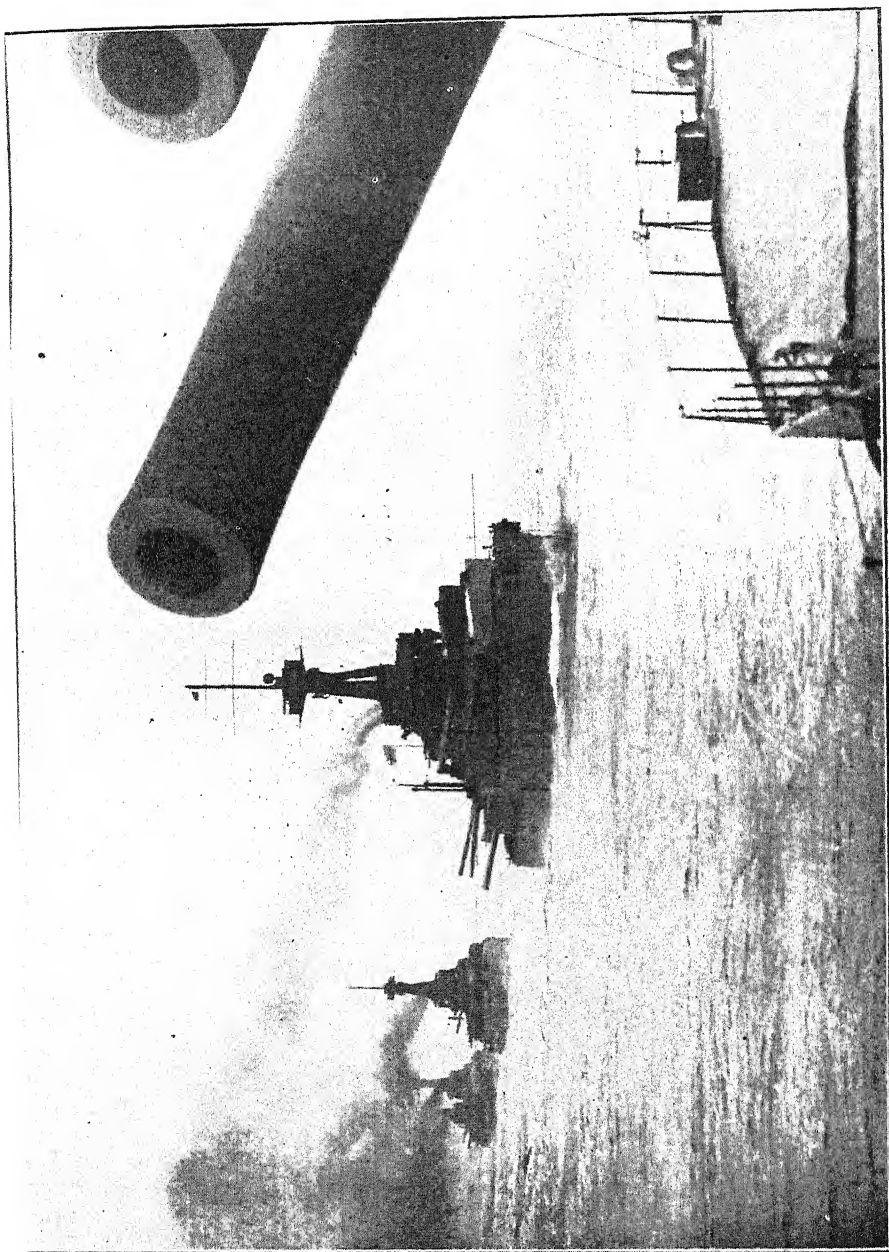
assembled on the tangle of ironwork and debris which was all that remained of her deck, and the order, "three cheers for his Majesty, the Emperor," was given. In the stillness that had followed the roar of battle the sound of the cheers rose, as the hull began to capsize towards the starboard side. Captain Maerker had given orders to open the valves and blow up the ship; and at 6 p.m. the GNEISENAU lay keel uppermost and then vanished for ever stern foremost, after a heroic fight. From the men in the icy water rose once more the sound of cheering for their Sovereign.

Though it was summer in the southern hemisphere that sea in which she went down is chilled by Antarctic icebergs and by the cold currents from the Polar Continent, and the temperature of the water was only 6 or 7 degrees above freezing point. It was some time before aid could be given to the drowning men as many of the British boats had been damaged in the action. One hundred and eight Germans were picked up by the *Invincible's* boats, sixty-two by the *Inflexible's*, and seventeen by the *Carnarvon's*, though several of them died of exhaustion or heart failure. Among those who perished in the two German ships were Spee and one of his sons (another fell in the NÜRNBERG) and both the captains. The weather broke, and fine rain began to fall just before the GNEISENAU sank; had it come on two or three hours earlier, it would have favoured the escape of the German ships, a fact which showed the danger of delaying the decisive blow.

Thus ended this struggle between giants and dwarfs. The following are the figures for the action:

BRITISH. Complete victory in about 4 hours of firing.							
Ships.	Tons.	Rounds		Hits on.	Killed	Wound- ed	Priso- ners.
		Fired.	ab.				
Invincible	17,250	abt. 630	22	0	1	—	6,800lb. ¹
Inflexible	17,250	560	3	1	2	—	6,800 „ ¹
Carnarvon	10,850	?	0	0	0	—	900 „
	45,350	—	25	1	3	—	14,500 „
GERMAN.							
Scharnhorst							
	11,420	unknown	—	860	abt. —	—	1,953 „
Gneisenau	11,420	abt. 1000	30	680	—	187	1,953 „
	22,840	—	—	1,540	—	187	3,906 „

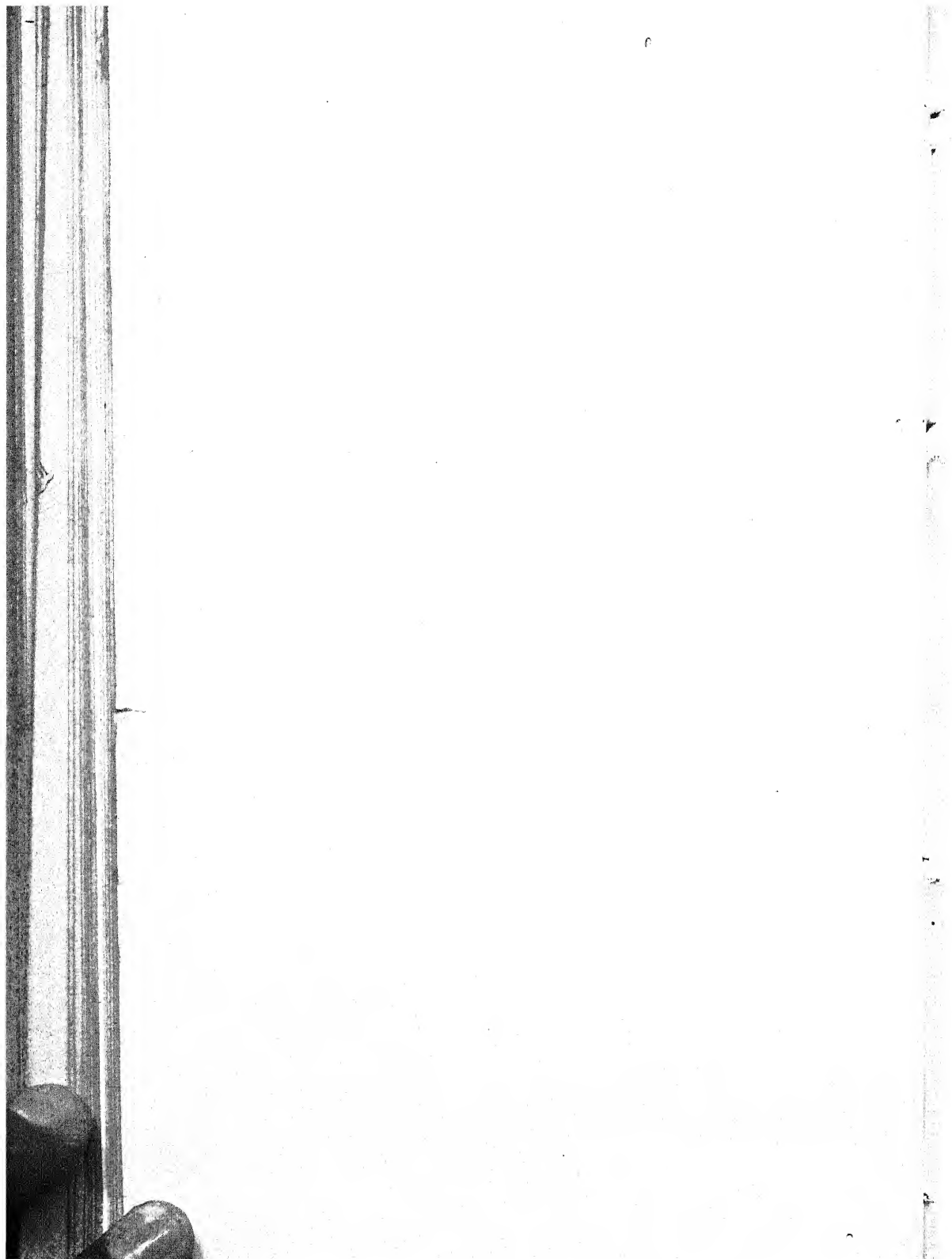
¹ In actual fact only six of the eight 12-inch guns in the battle cruisers were able to fire on the broadside without severely straining the ships, reducing the weight of metal to 5,100 pounds, or 11,100 pounds for the British. Verner (p. 51) is the authority for the 1 man killed in the *Inflexible*.



[p. 30

PLATE 25
BRITISH BATTLESHIPS OF THE GRAND FLEET AT SEA

The ships seen steaming in line are vessels of the *Iron Duke* class, mounting ten 13.5-inch guns in five turrets apiece. The low topmast marked all British ships in the war period from 1915 onwards; in some ships it had been adopted in 1913 or 1914.



The action is one of those between ships of an inferior and a superior class, and is therefore not of any great tactical importance. The British had an overwhelming advantage in speed, weight of metal and displacement. Credit for the British success rested largely with Fisher and Churchill, as they sprang this terrible surprise on the German commander and made the boldest use of the resources at their disposal. Their despatch of the battle cruisers was beyond question one of the greatest strokes of the war and it brought the only decisive victory at sea for the British Navy in a squadron engagement. The large expenditure of ammunition by the British ships was regarded with extreme impatience by Fisher, but in the circumstances and considering what the shooting of the German vessels was and the immense importance of the two battle cruisers, it was certainly wise to take no risks.¹ His opinion of Spee's leadership was that it was admirable except in the attack on the Falklands, which was "asking for trouble."

Of the hits on the British ships, two on the *Invincible* were below the water-line but did no great damage. One of the foremast tripod legs was shot away; the steadiness of the mast, however, was not seriously impaired. An 8.2-inch shell struck full between the guns in the fore turret where the armour was 12-inch thick,² and it did not penetrate. The wardroom was completely wrecked by two shells, and a solid steel 8.2-inch projectile cut through the barrel of one of the 4-inch guns. The damage looked extremely serious and yet it in no way affected the fighting quality of the ship, and as the crew had been kept behind armour there had been no loss. The *Inflexible's* hits were even more unimportant; she had been so screened in the *Invincible's* smoke that the Germans could not bring their fire to bear on her. The *Carnarvon* had been very properly kept out of range for most of the action and she was untouched.

As all were lost in the *SCHARNHORST*, no record of hits on her remains, but she was seen from the *GNEISENAU* to have a large hole on her starboard side. In the *GNEISENAU*, most of the British shells fell vertically and striking the upper deck, flung splinters downwards, gradually putting the guns out of action. Thus one shell disabled both the port and starboard forward 8.2-inch casemate guns, penetrating the

¹ This is also Chack's opinion, ii, p. 380.

² So Bingham, *Falklands*, p. 84. I cannot remember this ship carrying armour of such thickness anywhere, though I was several times on board her.

armoured roof and exploding in the casemate; the emergency supply of ammunition took fire and all in the forward casemates except two were killed. Three direct hits on the casemate armour (6-inch) were observed; two penetrated and burst inside doing great damage; one was stopped, knocking off a portion of the plate. There were at least six bad hits below the water-line, one of which put the starboard engine out of action, and another caused No. 1 Stokehold to fill and gave the ship a list of 7 degrees. She could not be righted because there was too much water in her, but her list was diminished to 5 degrees. The steering gear was put out of action by a shell which bent down the armour deck and jammed it, without piercing the deck. There were numerous hits outside the armoured portions of the ship and both the main and reserve dressing stations were wrecked with grievous loss of life among the wounded.

While the battle cruisers destroyed the German armoured cruisers two detached actions were fought by the other British ships with the German light cruisers. The DRESDEN with a speed of 22 or 23 knots took the lead and steered south. Her coal consumption was so heavy that she would have to recoal at an early date and could only hope to do so at some point in Tierra del Fuego. The NÜRNBERG and LEIPZIG headed rather more south-east, to be able to rejoin Spee should he manage to escape. Both were in bad condition. Chase to these three vessels was given by the light cruiser *Glasgow* and armoured cruisers *Kent* and *Cornwall* (each nine 6-inch guns broadside). For the certain destruction of the Germans it was necessary that each British cruiser should take one of the Germans, fixing her quarry according to her own speed. The *Glasgow* was the fastest and superior in speed to the DRESDEN; the other two ships were antiquated, but they had done 23 knots. They carried armour which the German light cruisers could not injure except at the shortest range. The *Glasgow* had no such protection, and owing to the scanty number of really fast light cruisers in the British Navy was a unit of exceptional value.

At the outset the *Glasgow* chased the DRESDEN and these two ships quickly left the other four behind. The *Glasgow*, however, quite early in the pursuit reduced speed to attack the rearmost German ship, the LEIPZIG, in the belief that the *Kent* and *Cornwall* would not be able to get up and that all the Germans would escape. The Official German History criticises this conduct very sharply as wanting in energy and

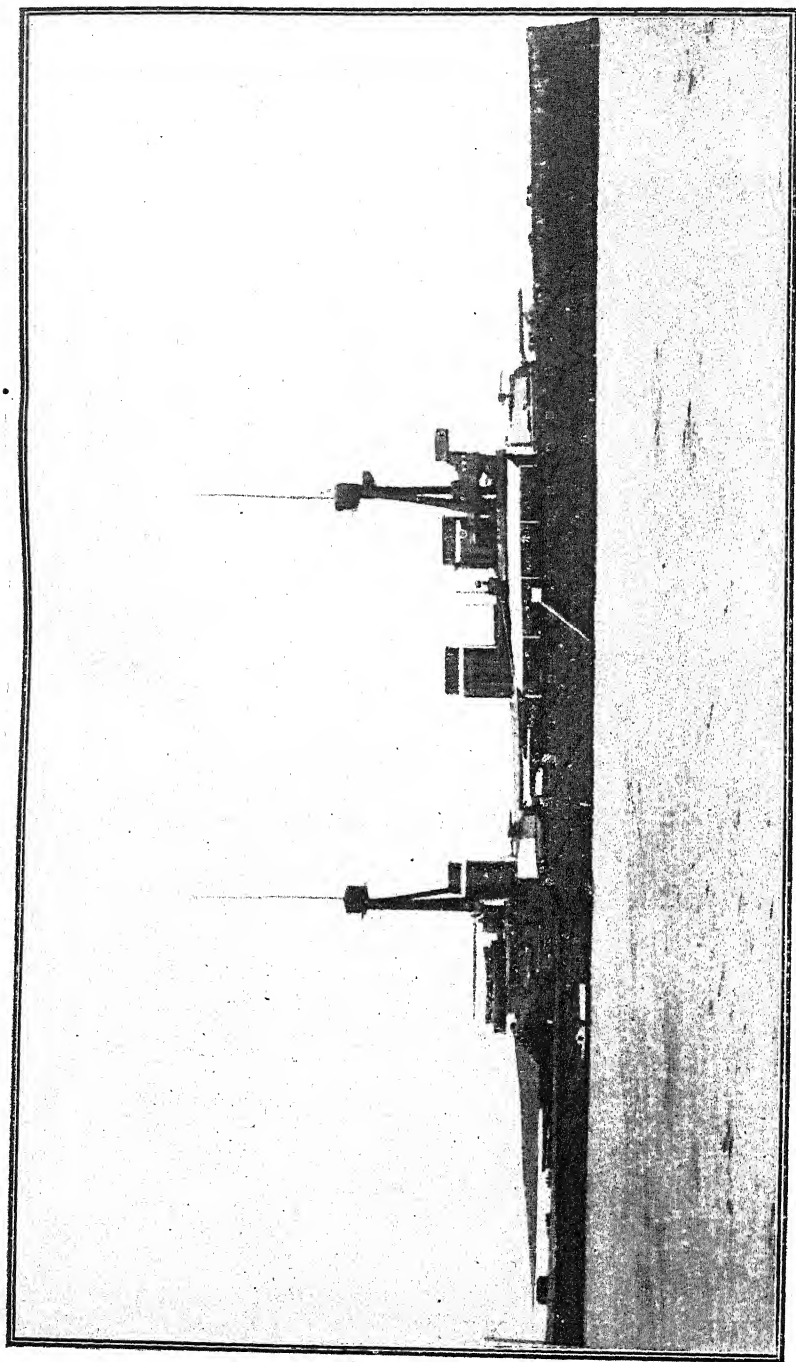


PLATE 27

THE BRITISH BATTLE CRUISER "INVINCIBLE"

Sunk at Jutland, flying the flag of Rear-Adm. the Hon. H. L. A. Hood. In the battle of the Falklands she was Adm. Sturdee's flagship. At Jutland she was heavily hit on Q turret, seen amidships, and the fore turret, also plainly seen. Flames shot up from both turrets and she vanished in a great explosion leaving only 6 survivors. In 1916 she carried low topmasts of a heavier pattern. The *Indomitable* and *Inflexible* were her sister ships.

[p. 62

[See p. 152

due to fear of a ship-to-ship action with the DRESDEN, despite her great inferiority in weight of metal. There is no allusion to the point in the British Official History, nor is it known whether the plan followed by the *Glasgow* had been ordered by Sturdee. At 2.53 p.m. at a range of 12,000 yards the *Glasgow* opened fire on the LEIPZIG; the German vessel replied ineffectually, and at 3.13 received the first hit. The LEIPZIG was repeatedly and severely hit and her speed fell till soon after 4 the *Cornwall* was close enough to open fire and the *Kent* was also able to join in at extreme range, though she speedily went off in chase of the NÜRNBERG.

The LEIPZIG was very slowly shot to pieces above the water-line by the overwhelmingly superior fire of the *Cornwall* and *Glasgow*, but she still floated. At 7 p.m. all her accessible ammunition was exhausted; all her guns were out of action; and each end of the ship was burning furiously. The order to sink her was given by her captain at 7.20, but she did not hoist the white flag, and as explosions took place on board her, which were mistaken for guns firing, the British ships, after stopping their fire, reopened. Not till 9.23 did she go down taking her captain with her. Of her crew only eighteen officers and men could be rescued from the icy water. The damage to the British ships was slight.

Leipzig sunk after about five hours' intermittent firing.

	Tons.	Rounds fired.	Hits on.	Killed.	Wounded.	Prisoners.	Broad- side.
Glas- gow	4,820	?	2	1	4	—	355 lb.
Corn- wall	9,800	?	18	0	0	—	900 „
	14,620		20	1	4	—	1,255 „
Leip- zig	3,200	?	50 ?	280	—	18	175 „

Owing to the enormous British superiority of force there is little of tactical importance to learn from the combat. The only question is as to the correctness of the *Glasgow's* plan of action. According to the German accounts she might, after forcing the LEIPZIG into an encounter with the *Cornwall*, have herself proceeded in chase of the DRESDEN, before that ship had vanished; and she did not do so. In the early part of the action between the *Glasgow* and LEIPZIG the DRESDEN gave her comrade some aid.

The *Kent* was a bad steamer and short of coal, but in her chase of the NÜRNBERG her engine room and stokehold complement performed wonders and is said to have exceeded 23 knots. At 5 p.m. the NÜRNBERG opened, but not till 5.10 did the *Kent* fire her first shot and that fell short owing to the antiquated mountings of her guns. The NÜRNBERG's boilers began to give out at this juncture and the little German vessel gallantly turned to fight the British armoured cruiser of treble her tonnage at 5.45. The *Kent* could now, at 6,000 yards, employ her entire broadside of nine 6-inch guns; she maintained a bearing before the beam of the NÜRNBERG, to avoid torpedo attack, and shortened the distance. The German cruiser was wrecked above the water-line by this fire but she did not sink till 7.27. In the bitterly cold water only seven souls could be rescued, and the horror of that scene of death was deepened by the great albatrosses which hovered near the surface and attacked the dying.

The *Kent* sustained thirty-eight hits, none of them dangerous to her fighting or nautical qualities. Her casualties, which were the largest in any British ship, were due to a German projectile exploding in the port of a casemate and setting fire to a quantity of ammunition. Of her wounded two subsequently died. Her performance was a fine one from the engineering standpoint, and her tactics were good, though with her immense superiority in force there could be no doubt as to the result. The figures are:

Nürnberg sunk after about 2 hours' firing.

		Hits				Prison- Broad-	
	Tons.	on.	Killed.	Wounded.		ers.	side.
Kent	.. 9,800	38	4	12	—	900 lb.	
Nürnberg	.. 3,396	?	290	0	7	175	„

The *Kent*'s wireless was put out of action in the engagement and she was in consequence unable to report her success to Sturdee.

The light cruiser *Bristol* with the armed liner *Macedonia* received orders from Sturdee to sink "the transports" which were supposed to be following Spee and which had been sighted from the Falklands. At 3.30 these British warships brought to two German supply ships, BADEN and SANTA ISABEL. They were not transports and had cargoes of oil, coal and stores, all of which would have been of immense service to Sturdee, but then and there without referring to his admiral, the British senior officer sent these two valuable prizes to

the bottom. It was an unfortunate end to a day of signal success. The German hospital ship SEYDLITZ escaped and was interned.

As the DRESDEN had been allowed to escape, an incident of which, rightly or wrongly, Fisher always complained, Admiral Sturdee spent some days hunting for her; and after he had returned to Europe half a dozen other vessels continued the hunt while she lay hidden in secluded harbours on the Chilean coast. She was finally located on March 14, 1915, in Cumberland Bay, Mas-a-Tierra, in Chilean waters, and was there sunk by the fire of the *Glasgow* and *Kent*, many of her crew being ashore. She was not in a position to fire effectively so that there was nothing which could fairly be described as an action; her loss was 8 killed and 29 wounded. Like the seizure of the *Florida* by the United States warship *Wachusett*, and the *Rieshitelny* by the Japanese destroyers, this was an infringement of international law. But it was due to the fear that the neutral Power would not be strong enough to compel the internment of the hostile warship in its waters. German cruisers and auxiliaries had repeatedly violated the conditions laid down in the Chilean neutrality proclamation and had for several months made Chilean harbours their bases.

CHAPTER XX

*German Attack on Commerce—Career of "Karlsruhe"—
"Kaiser Wilhelm der Grosse" and "Cap Trafalgar" Sunk—
"Königsberg" and "Pegasus"—Cruise of the "Emden"—She
Sinks the "Jemtchug"—Herself Sunk at the Cocos—Her
Heavy Loss—Belgian Coast Bombardments—U Boats in the
Channel—Grand Fleet Loses the "Audacious."*

OWING to their belief that the war would be short and swiftly decided by the destruction of France, the Germans had made insufficient preparations for an attack on Allied trade. They had arranged secret bases for coaling but on the outbreak of war their agents, strangely enough, were short of funds. Reference has already been made to the hesitations on the part of the German Government which in the period of tension prevented the despatch of numerous auxiliary cruisers to sea. Thus from a variety of causes British shipping was not subjected to the violent attack which might have been anticipated.

This was perhaps fortunate as the British measures for its protection were not of an entirely satisfactory kind. The Staff had not been able to watch the German cruisers on foreign stations on the eve of war and to place close to them, shadowing them, British ships of superior speed and power. The fact was that it had not got the ships, and the shadowing policy, plausible as it sounded, was not in practice easy to carry out. Spee's squadron, for example, vanished weeks before war began. The chief measures of defence adopted by the British Staff were the despatch of British cruisers to the focal points where sea routes met, and the alteration of routes followed. For security the first task of the British was to eliminate the German cruisers at large, apart from

Spee's squadron, the operations of which have just been detailed.

They were: In the Atlantic, the light cruiser KARLSRUHE (broadside six 4.1-inch guns, 29.3 knots), the auxiliary cruiser KAISER WILHELM DER GROSSE (three 4.1-inch guns broadside, 23 knots), and from the end of August onwards the auxiliary cruiser CAP TRAFALGAR which was converted into a warship on the high seas, a practice not permitted by the older customs of naval war (broadside two 4.1-inch guns with small machine guns). In East Africa was the light cruiser KÖNIGSBERG (five 4.1-inch broadside, 24.1 knots); and in the Far East the light cruiser EMDEN (five 4.1-inch, 24.5 knots). Besides these there were a number of small or old vessels which played no part in the war, though with a more resolute lead at the German Admiralty they might have caused a good deal of trouble.

Against these few isolated ships the British Navy had considerable squadrons, composed, however, almost entirely of old and slow vessels. In the east Atlantic were the 11th and 9th Cruiser Squadrons, consisting of old protected cruisers and covering the European ends of the trade routes. In the west Atlantic was Cradock's 4th Cruiser Squadron, composed at the outset of the armoured cruisers *Suffolk*, *Berwick*, *Essex* and *Lancaster*, with the modern light cruiser *Bristol*. This was later replaced by the 6th Cruiser Squadron, composed of the armoured cruisers *Good Hope*,¹ *King Alfred*, and *Leviathan*. In the central Atlantic was the 5th Cruiser Squadron, composed of the armoured cruisers *Carnarvon*, *Cornwall*, *Cumberland* and *Monmouth*, while the Cape and East Indies had each a small number of antiquated cruisers. These old vessels would have been of much greater service had a policy of convoy been adopted, but from that the Admiralty shrank because the shipping community regarded it as dangerous to national interests. In the British Navy at this date there was no cruiser fast enough to catch the KARLSRUHE; and on the Cape station nothing fast enough to keep up with the KÖNIGSBERG. The failure to build fast light cruisers in numbers before the war was felt severely, and the British people may thank their good fortune that it did not bring much more disastrous consequences.

The career of the KARLSRUHE was interesting. She was sighted by Cradock with the *Suffolk* and *Bristol* on August 6 off the Bahamas. The *Suffolk* gave chase but being so much

¹ Subsequently transferred to Cradock.

slower was easily outdistanced. The *Bristol*, however, got within 6,000 yards of her, when the two cruisers interchanged fire, each discharging about eighty rounds. The KARLSRUHE failed to hit the *Bristol* as the light was most unfavourable to the German gunners, and the *Bristol* was equally unsuccessful without any similar handicap on her men. Though she had some advantage in weight in metal,¹ if not in size or engine power, her gunnery was not good enough to enable her to stop her antagonist; and her speed presently fell to 18 knots—about 8 knots below her nominal figure. There was thus a double failure in shooting and steaming power, due to which the German cruiser drew away. The KARLSRUHE at this moment was extremely short of fuel, with only 112 tons of coal and 31 tons of oil out of a total supply of 1,320 tons of coal and 190 of oil. If the British vessels had only been able to press her a little harder, she must have been destroyed.

She escaped with many adventures and was never again in danger. In her operations she, like most of the German cruisers, was greatly assisted by the constant wireless signalling on the part of the British cruisers seeking her. They steamed about the high seas as it were proclaiming, "Here I am!" so that she was easily able to avoid them. The German Official History remarks severely on the carelessness of the British commanders² though as a matter of fact the German commanders in the North Sea and the German submarines in particular were just as careless. This is a point which requires special attention, for it is hardly an exaggeration to say that in the Great War each side was apt to disclose by wireless its position to its antagonist.³

The KARLSRUHE operated on the north-east coast of Brazil, coaling at a secret base, and her operations are of historical importance as she began the "hunger war." On September 21 she seized the Dutch steamer *Maria*, with 6,000 tons of wheat from Portland (Oregon) to Belfast and Dublin, and sank this neutral vessel on the charge that its wheat was contraband.⁴ The action was upheld by a decision of the German prize court which makes nonsense of the German protests against the inhumanity of the British

¹ *Bristol* 355 pounds broadside, 160 pounds ahead fire, 4,820 tons, 26.8 knots, launched 1910. KARLSRUHE 4,822 tons, 210 pounds broadside, 140 pounds ahead fire, 29.3 knots, launched 1912.

² *Kreuzerkrieg*, ii, p. 269.

³ The British, however, were quicker in using wireless information, as the German History admits. *Nordsee*, v, pp. 281, 387.

⁴ *Kreuzerkrieg*, ii, p. 286.

blockade of Germany. The destruction of a neutral vessel at sea without proper condemnation was further a breach of the established rule of war at sea.

In all, the KARLSRUHE seized sixteen British ships and one Dutch vessel, totalling 76,609 tons and valued with cargoes at £1,500,000. Of these she sank fourteen and converted three into auxiliaries. Cradock most reasonably pointed out to the British Admiralty that the plan of hunting this German hare with a collection of British tortoises was not likely to be successful, but had he enforced the strict wireless discipline which Sturdee secured later, the KARLSRUHE might have been sunk at an early date. As it was on November 4, 1914, she was 350 miles east of the British Island of Trinidad, in the West Indies, when at 6.30 p.m. a loud report was heard in the forepart of the ship, followed by several other detonations. The entire forepart was blown off, probably through the spontaneous explosion of a magazine, and her captain with 262 other officers and men perished in the disaster. A collier in her company saved 146 officers and men, of whom many were badly burned. This was the only case of an internal explosion in a German ship in the war, and after it the stern floated for twenty-seven minutes. The loss of the KARLSRUHE was not known till many weeks later to the British Staff, as it was supposed that she had returned to Germany.

The career of the KAISER WILHELM DER GROSSE soon ended.¹ After she had made five British prizes, she was caught by the British cruiser *Highflyer* coaling in Spanish waters off the coast of the Rio de Oro on the Sahara coast and her surrender was demanded on August 26. Her captain protested that he was in neutral waters, in which he had been actually lying for nine days, in entire defiance of the customs and laws of naval war. An hour and a half's grace was given during which his colliers fled, and then the *Highflyer* opened fire. For ninety minutes the German vessel replied, till her ammunition was exhausted when her crew scuttled her and escaped ashore. The odds against her were overpowering—the *Highflyer's* broadside was 600 pounds against the German 105 pounds, and the *Highflyer* was further built as a warship with a strong protective deck. But if the German accounts are accurate the KAISER WILHELM was only slightly damaged by the British gunfire. The British loss was 1 killed and 5 wounded and the German loss 2 wounded. The Spanish

¹ See Lieut.-Commander Aye, *Kreuzerjagd im Ozean*, (Berlin 1917.)

Government protested, but on learning the facts accepted a British apology.

The CAP TRAFALGAR did not long trouble British commerce. She had escaped from Argentine waters and had been armed at sea from the gunboat EBER but had made no prizes. The British auxiliary cruiser CARMANIA came upon her off the Brazilian island of Trinidad on September 14 and soon after noon began a hammer-and-tongs action with her. The *Carmania's* broadside was four 4.7-inch (45-pounder) guns, and the CAP TRAFALGAR's, two 4.1-inch 35-pounders, with in addition three automatic 1-pounders. The two closed to 3,500 yards; both took fire; but at 1.30 p.m. the CAP TRAFALGAR, badly damaged, bolted. Becoming unmanageable from the injuries received and the fires on board her, she was sunk by her crew who were picked up by a German collier. The *Carmania* was herself in danger of sinking and was badly on fire. She was a good deal knocked about and had five hits on the water-line besides seventy-four elsewhere; her loss was 9 killed and 26 wounded; the German casualties have not been disclosed. This was the first engagement in the war between armed merchant ships.

The KÖNIGSBERG on the East African station was far superior in speed to any British cruiser in her vicinity. On July 31 she put to sea, and off Daressalam met the British Cape Squadron (light cruisers *Hyacinth*, *Astraea* and *Pegasus*). As war had not been declared and she worked up to 22 knots the British squadron was soon left behind. The KÖNIGSBERG, after a detour south to mislead the British, proceeded to the Gulf of Aden, where, however, she only made one prize. Meanwhile the British cruisers *Astraea* and *Pegasus* secured the destruction of the German wireless station at Daressalam and the surrender of certain small German merchant vessels there and at Tanga. The KÖNIGSBERG, after a brief cruise in the Gulf of Aden, found British vessels concentrating about her and heard the constant note of their wireless; she therefore returned south, appeared on the Madagascar coast, and then retired to a hiding place in the Rufiji.

She emerged thence to destroy the British cruiser *Pegasus*, which was lying at Zanzibar—a weak seventeen-year-old vessel of 2,135 tons with a broadside of four 25-pounders engaged in carrying out repairs to her dilapidated machinery. As the German wireless had not been heard, the very dangerous conclusion was drawn by the British that the KÖNIGSBERG

was not near. Early in the morning of September 20 at 7,700 yards the German cruiser (140 pounds broadside) opened fire on the *Pegasus*, in three salvos got her range, and rapidly shot her to pieces at a distance where her old-fashioned guns could not reply. All her broadside guns were put out of action and she lost 34 killed and 61 wounded. She sank after the action; according to the Germans during it she hoisted the white flag. The KÖNIGSBERG was untouched. The Germans also shelled and put temporarily out of action the wireless station.

This brilliant success ended the KÖNIGSBERG's career of mischief by at once attracting to her more powerful British cruisers. She disappeared into the Rufiji but on October 30 her hiding place was detected, and she was thenceforward closely blockaded by superior forces. The river was so shallow that the British ships could not reach her. Early in November she was shelled by the *Chatham*, *Dartmouth* and *Weymouth* (each five 6-inch guns broadside) without result, as they could not see her. To block the channel the British sank a vessel in it, but not till July, 1915, was the KÖNIGSBERG destroyed. The light-draft monitors *Mersey* and *Severn* were used against her, with aircraft to spot for them, and on July 11, 1915, she was at last set on fire and sunk.

She fought furiously to the end and inflicted on the British a loss of 6 killed and 5 wounded; the German loss was 19 killed and 45 wounded. The guns of the KÖNIGSBERG and many of the stores in her were recovered by the Germans and used in the East African campaign. It is proof of the trouble which a single not very formidable cruiser can cause that before the KÖNIGSBERG was disposed of the following British ships were required for operations against her: old battleship, *Goliath*; light cruisers, *Hyacinth*, *Chatham*, *Dartmouth*, *Weymouth*, *Pyramus*, *Pegasus*, *Pioneer*, *Fox*, *Astraea*; monitors, *Severn* and *Mersey*; and numerous auxiliary craft.

During these operations Daressalam was bombarded by the *Fox* and *Goliath*, which ships had proceeded to that German port to secure the disablement of German vessels inside. A white flag was flying ashore, and after some negotiation the *Fox* sent in her boats which took the necessary measures to disable the engines in the German vessels. As the boats were coming out again, they were fired upon with the loss of 1 killed, 14 wounded, and 12 missing. The British ships in reprisals shelled the place; on November 30

they repeated the bombardment, firing in all on the two days 500 to 600 shell and doing a good deal of damage. The firing on the boats while the white flag was flying appears to have been due to a misapprehension, but which party was at fault is uncertain.

By far the most troublesome of the German cruisers was the EMDEN (Captain Müller) a light cruiser of 24.1 knots with a broadside of four 35-pounder 4.1-inch guns. She was detached by Spee at Pagan and sent to operate in the Indian Ocean. Proceeding through the Malay Archipelago with two colliers, MARKOMANNIA, and PRINCESS ALICE, Müller heard on August 27 the wireless of the *Hampshire*; and disguised his vessel by fitting her with a dummy fourth funnel, so that at a distance she could easily be mistaken for a British cruiser. The British Staff had not the slightest idea of his whereabouts and supposed him to be still with Spee. South of Sunda Straits the loud British wireless signals warned him to take cover, and he put into a secluded island off the west coast of Sumatra and there coaled before the Dutch ordered him off. Thence he steamed up into the Bay of Bengal and, helped by wireless from British vessels, captured and sank seven British steamers between September 9 and 15, and placed their crews on board a neutral. He even steamed within sight of the Orissa coast though this was due to accident—the effect of a strong current which set him too far to the west. Then, realising that British cruisers were certain to be hot in his quest, and picking up wireless signals which showed that British vessels were being ordered to take refuge in the Hugli, he steamed off towards the Gulf of Martaban, coaling at sea on the way.

In actual fact a large number of ships concentrated against him, so soon as his whereabouts were discovered—the British armoured cruisers, *Minotaur* and *Hampshire*; the British auxiliary cruiser, *Empress of Asia*; the Japanese armoured cruiser, *Ibuki*; the French armoured cruiser *Dupleix*—all which five ships were much too slow to catch him. In addition, the British light cruiser *Yarmouth* (26 knots) and the Japanese light cruiser *Chikuma* (26 knots) were searching for the EMDEN and were fast enough to overtake her as well as strong enough to fight her. She would almost certainly have been caught had not the Indian military authorities sent to the *Hampshire* a wireless message, which was not in code and which Müller read. It put him on the alert and he got away.

He doubled back across the Bay of Bengal and in the evening of September 22 appeared off Madras, shelled the oil tanks there discharging 130 rounds at them, and set two on fire, destroying 450,000 gallons of fuel. Ashore 5 persons were killed and 12 wounded. When the batteries opened the EMDEN disappeared untouched and next showed herself off the French port of Pondicherry. She had another narrow escape from the *Hampshire* and *Chikuma*, which were not far from her, and then some days later was reported off the west coast of Ceylon, where she made six prizes between September 25 and 27, sinking five and sending one into port with the crews. After this Müller with excellent judgment retired to the Maldives where he coaled at an unfrequented island and then steamed off southward to the Chagos group, where the people knew nothing of the war and where he careened and cleaned his ship quite in the style of the old buccaneers.

Intercepting a British wireless, "Route Aden-Colombo fairly safe," he decided to pay that route a visit, and did so with such success that, between October 16 and 20, six British ships (one of them with cargo worth over £200,000) were taken and one more was sent into port with the crews. On October 21 he had an extraordinarily lucky escape from the *Hampshire*, which passed close to him, in search of him, in rain squalls and so missed him. In the meantime Müller's colliers had been caught by the British cruiser *Yarmouth* on October 12 off the Dutch island of Simaloer, west of Sumatra, where they asserted that they were in neutral waters. One of them, the Greek vessel *Pontoporos*, was taken to Singapore; the other, the *MARKOMANNIA* was sunk. Both were outside the three-mile limit, and though the Dutch claimed that their territorial waters extended further, that claim was not admitted by the British commander nor was it seriously upheld by the Dutch Government.

The EMDEN now steamed across the Indian Ocean and coaling on the way from one of her prizes at the Nicobars, on October 26 made for Penang. Müller had obtained information from one of the ships stopped by him as to the insufficient precautions taken by Allied warships in that undefended British port.¹ In the early morning of October 28, with her dummy fourth funnel rigged and painted the same colour as British ships, the EMDEN appeared off Penang flying the white

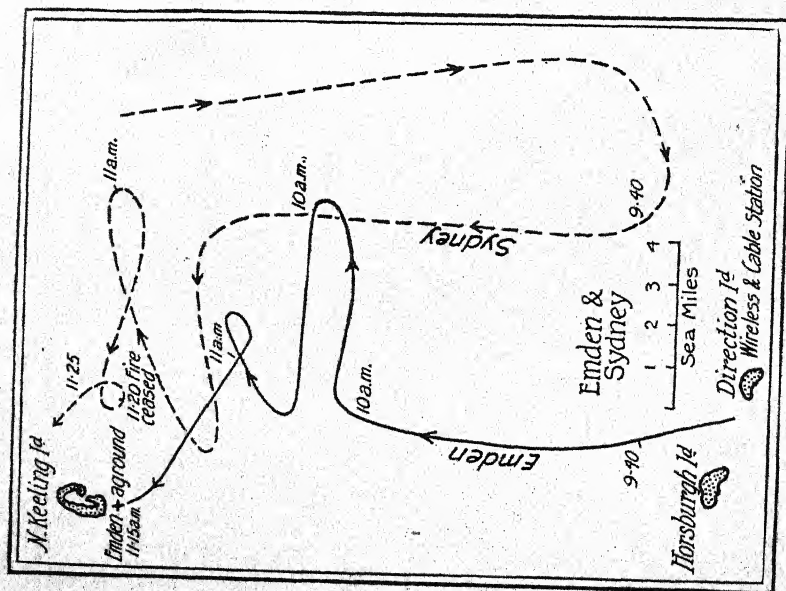
¹ As to the alleged fatal neglect of precautions there by the British authorities on shore, see Chack, ii, p. 115 ff.

ensign. She steamed in to 400 yards from the point where the Russian light cruiser *Yemtchug* (four 4.7-inch 45-pounders, broadside, 3,130 tons, 21 knots) was lying and hoisting¹ the German flag discharged at the *Yemtchug* a torpedo and immediately after poured salvo after salvo into the Russian ship. The torpedo hit the *Yemtchug* and the gun fire set her ablaze; the EMDEN then turned and discharged another torpedo at her which sank her with a violent explosion less than fifteen minutes from opening fire. Just as the German cruiser was steaming off, a British steamer came into sight and was at once ordered to heave to, when the French destroyer *Mousquet*—a small vessel of 298 tons armed with nothing more formidable than a 9-pounder and half a dozen 3-pounder guns and a couple of 15-inch torpedo tubes—arrived on the scene. She was returning to port from patrol duty and her appearance saved the British ship.

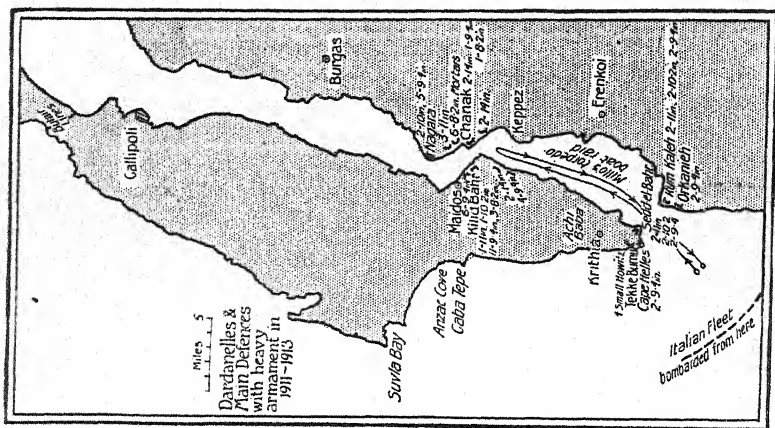
She most gallantly engaged the EMDEN in a hopeless fight in which she was very quickly sunk. Müller with great humanity picked up the survivors, to whom he gave every attention, and then departed as fast as he could. In the *Yemtchug* the loss was 91 killed and 108 wounded, and the Russian captain and commander were subsequently severely punished by court martial for neglect of precautions. Three other weak French vessels (an old torpedo gunboat and two small destroyers) were in the harbour, but took no part in the fighting, and if they had done, would have been destroyed to no purpose. In the *Mousquet* 43 were killed and 36 made prisoners, of whom 5 died of their wounds.

After this most audacious exploit the EMDEN steamed west to the Nicobar Islands, taking on the way a British steamer, her last prize, which she sent in with prisoners to a Sumatra port; she coaled for the last time off one of the small islands west of Sumatra, having altogether coaled eleven times during her campaign. On November 5 she steamed to the Straits of Sunda, and then turned and proceeded to the Cocos, a small group of islets in the Indian Ocean where Müller intended to destroy the cable station. It was a rash act on his part as he should have guessed that Allied warships were in the Indian Ocean in force, looking for him, though he could not know that just at this juncture a veritable Allied squadron was at hand engaged in the convoy of Australian and New Zealand troops. Wireless signals had become rare, and those that could be heard were in code as

¹ The French accounts deny that she showed the German colours.



Action between the *Sydney* and *Emden*, 1914.
Time shown are British and a.m.



DARDANELLES DEFENCES BEFORE THE GREAT WAR

strict wireless discipline was now being enforced by the British.

Early on November 9 Müller reached the Cocos and put a landing party ashore to destroy the cables and wireless station. But before this could be done the wireless station got off the vital news, "Strange ship off entrance," and the cable station put through a series of cable messages which set half a dozen British ships in movement. The promptitude and energy of the Cocos staff were rewarded by a great success. At 7 a.m. that morning Captain M. L. Silver of the *Melbourne*, senior officer in the detachment convoying the Australian troops, which was then 55 miles north of the Cocos, took in the wireless signal and instantly grasped its meaning. The *Sydney* (Captain J. C. T. Glossop) light cruiser was ordered by him forthwith to go in quest of the stranger, though the Japanese armoured cruiser *Ibuki* (four 12-inch and four 8-inch broadside) asked the honour of being given that task. But she was so powerful a vessel that it was thought wise to keep her with the convoy, in case other German ships appeared.

At 9 a.m. smoke was seen from the crow's nest of the *EMDEN* as she lay at anchor off Direction Island, and was taken to be from one of her colliers. A little later the ship approaching was wrongly reported to have one funnel (instead of four) but at 9.20 Müller saw that the stranger was an enemy. He made the signal of recall for the sixty men ashore, and ordered steam to be raised in all boilers and the anchor to be weighed. At 9.40, both ships then steaming north, fire was opened at 10,300 yards by the *EMDEN*, which began to hit at the second salvo, putting the *Sydney's* forward range-finder out of action and killing the observer. Several minutes passed before the *Sydney* got the range but when she did the effect of the lyddite shells from her 6-inch guns was overpowering. She had an advantage of some 4 knots in speed and a weight of metal treble the *EMDEN's*, so that there could be no doubt as to the result.

At 10, the *EMDEN's* steering engine was disabled, a bad fire started at the fourth starboard gun, and as the flames spread the ship had to be steered by her screws. An attempt to use torpedoes was easily defeated by the *Sydney* which fired a torpedo herself, but unsuccessfully. The *EMDEN* was in her death-throes, burning violently aft, and amidship a tangled mass of scrap iron. Her funnels and her foremast had been shot away, and her guns were out of action. About

11.20 the EMDEN ran hard ashore on North Keeling Island, in a damaged and sinking condition, and ceased fire. The *Sydney* meantime went off in chase of the EMDEN's collier, the BURESK, which the German crew sank when they could not escape. She returned about 4 p.m., and finding the EMDEN's flag still flying and no sign of surrender, opened fire once more, causing the Germans heavy loss. On this the white flag was displayed and the firing ceased. The figures for the action are:

		Hits			Prison- ers.	Broad- side.
		Tons.	on.	Killed. Wounded.		
<i>Sydney</i>	..	5,400	16	4	13	0 500 lb.
<i>Emden</i>	..	3,592	50?	134	65 ¹	182 ² 175 lb.

The German landing party, which had been left ashore during the fight, seized a schooner, the *AYESHA*, and in her escaped to Sumatra, finally regaining Germany after many romantic adventures.

Thus ended the exploits of the EMDEN. Throughout, her captain behaved with chivalry and gallantry and he was treated with special attention by order of the Admiralty, after his capture. The damage he inflicted on British shipping was serious, though small in comparison with what certain of the U boats afterwards achieved. He took and sank sixteen British vessels of 70,825 tons, valued with cargoes at £2,150,000; he captured and released four British ships of about 18,000 tons; and he seized one Greek and one British ship which he used as colliers and which were in the end recovered by British cruisers.³ He also took one Russian ship. His last fight was a brave one against crushing odds. The damage to the *Sydney* was unimportant, but it should be noted that at the very opening of the action the German gunners made hits on or close to both her range-finding stations; and that a shell exploded in one of her ammunition hoists, scattering blazing cordite in the magazine below. Owing to the presence of mind of a man in the magazine party the cordite was put out before it had caused an explosion.

Two German auxiliary cruisers gave some little trouble. They were the KRONPRINZ WILHELM and PRINZ EITEL FRIEDRICH. The first was armed and equipped at sea by

¹ Four of these subsequently died.

² Including the 65 wounded.

³ One further British ship escaped after being captured, before a prize crew had been placed on board her.

the KARLSRUHE and had as her tender the German liner MACEDONIA, which escaped from Spanish internment at Las Palmas. She was finally driven into the United States port of Newport News on April 11, 1915, by the pressure of the British cruisers, after they had captured the MACEDONIA on March 28, 1915. The KRONPRINZ WILHELM took eleven steamers with a total of 53,700 tons, and four sailing vessels of which one was a neutral. The PRINZ EITEL FRIEDRICH captured eleven vessels, of which four were steamers and the others sailing craft. She was forced into Newport News on March 9, 1915. Both she and the KRONPRINZ WILHELM were there interned when they failed to put to sea at the expiration of the period of stay permitted. For similar reasons the old gunboat GEIER was interned by the United States at Honolulu, where she had anchored on October 15, 1914, and where she was watched by the Japanese armoured ships *Hizen* and *Asama*.

With the elimination of these vessels ended the first period of German attack upon Allied shipping. The loss to British commerce caused in that period by German action is placed by the British Official History at £6,691,000, on a total of shipping and cargoes valued at about £1,000,000,000. The ratio of loss was thus only .66 per cent., much lower than in the Napoleonic or American wars. Owing to the strange inertia of the Germans, the danger to trade from surface ships proved slight, even though insufficient fast British cruisers were available and such practical remedies as convoy were neglected.

The appearance of the Germans on the Flanders coast was followed on October 16 by an appeal from Joffre for naval support of the Belgians at Nieuport, on the extreme Allied left of the Ypres front. The problem of providing that support was a difficult one; there was the risk of submarine and mine attack, and the Belgian coast is bordered by shallows and sandbanks which prevent heavy ships from approaching the land closely. On October 18, 1914, Rear-Admiral the Hon. H. L. A. Hood arrived to give aid with the three light-draught gunboats or monitors, *Humber*, *Mersey* and *Severn*,¹ and a number of destroyers. These were subsequently reinforced by various old gunboats and small craft, as the Allied naval command was anxious not to expose powerful modern vessels to all the dangers that had to be faced.

¹ Each two 6-inch guns and two 4.7-inch howitzers: 6 feet draught.

For a fortnight Hood's vessels were day after day in action, and the moral effect of their fire on the German troops by German admission was marked.¹ It seems certain that they saved Nieuport and the locks controlling the admission of sea water, which were used a few days later to flood the land and cover the Allied left. On October 27, a critical day when the Belgian front visibly trembled, the old battleship *Venerable* was engaged, and her 12-inch shells enfilading the German front helped to defeat the German attack.

On October 30 Hood's flag flew in the French destroyer *Intrépide*, this being the first time that a French warship had acted as a British admiral's flagship. The Germans were already mounting numerous guns ashore and it had become unsafe for vessels to venture within 4,000 yards of the coast. But he held on steadfastly till at the opening of November the crisis at Ypres passed and the Germans abandoned the left bank of the Yser. The total loss of the British Navy in these operations was 12 killed and 41 wounded.

German submarines were already appearing in the Channel. The U 27 (Lieut.-Commander Wegener) was one of several boats to operate there with success. Before proceeding thither on October 18 while on duty off the German coast Wegener sighted E 3 (Lieut.-Commander Cholmley) near Borkum Riff light on the surface and fired a torpedo at her. The range was only 330 yards, and he hit the British boat amidships. She broke in two and only four of her crew were seen on the surface. These could not be saved, because, according to Wegener's account, he was afraid of attack by another British submarine in the vicinity.

On October 31 Wegener caught the British aircraft carrier, *Hermes*, in the Straits of Dover, hit her with two torpedoes, and sank her with a loss of 22 killed and 7 wounded. On October 26 U 24 (Lieut.-Commander Schneider) torpedoed the French steamer *Amiral Ganteaume*, crowded with Belgian refugees, giving her no warning. Forty non-combatants were killed, the Germans after first denying that the vessel had been torpedoed, asserting as an excuse that the *Ganteaume* had troops on board. She did not sink, however, and fragments of a German torpedo were recovered in her hull. On October 25 the British destroyer *Badger* claimed to have rammed and sunk the U 19, but actually the U boat escaped.

¹ Nordsee, ii, pp. 218, 276. *British Official Military History*, ii, p. 118. The large British shells broke into too few pieces to cause severe loss, as also was the case at the Dardanelles.

On November 11 the old British gunboat *Niger* at anchor off Deal was sunk with a British loss of 15 killed and 3 wounded by U 12 (Lieut.-Commander Forstmann).

The withdrawal of the Grand Fleet from Scapa, till that anchorage could be made fairly safe against torpedo attack, was followed by the one serious disaster which befell the British Battle Fleet at the hand of the Germans. The German auxiliary cruiser, *BERLIN*, eluded the British patrols in the North Sea on October 19, got out into the Atlantic, and with the sound of British wireless signals all about her, laid 200 mines off the north coast of Ireland, in the fairway of Atlantic shipping, and then escaped to Norway where she was interned. Into this minefield on October 27 ran the new British battleship *Audacious* (24,000 tons, ten 13.5-inch guns, completed 1913), then preparing for target practice with the 2nd Battle Squadron. At 9 a.m. there was a violent explosion and the port engine room was flooded.

It was supposed at first that she had been torpedoed by a submarine, and extreme caution was therefore advisable in approaching her. None the less Captain H. J. Haddock with the liner *Olympic* most gallantly and skilfully took her in tow, and it looked as if she might be saved. Unfortunately the sea rose and the water in her spread from compartment to compartment till it became necessary to remove her crew and abandon her. The light cruiser *Liverpool* stood by her till 9 p.m., when there was an explosion of great violence in her and she sank. The exact cause of her loss was never known but was supposed to have been defective lyddite shell.¹ Wreckage from her struck and killed one man in the *Liverpool*. As two merchant vessels ran on mines and sank about the same time, it was soon clear that a minefield had been laid, though the British command at first supposed that the mines had been scattered by neutrals. The loss of the *Audacious* was concealed but was too widely known to be long kept secret.

¹ There was a bad lyddite explosion in one of the *Achilles's* 9.2-inch guns about this date. See Jellicoe, *Grand Fleet*, p. 164. That incident "cast doubt on the safety of the whole of the lyddite shell afloat." The *Bulwark's* destruction a little later was attributed by some to the same cause.

CHAPTER XXI

Lord Fisher at the Admiralty—North Sea Mine-Laying—Bombardment of Yarmouth—Fisher's Immense Shipbuilding Programme—U Boats at Scapa—"Glitra" Sunk by U 17—Hartlepool Raid—British Counter-Movements—Hartlepool, Scarborough and Whitby Shelled—British Obtain Touch with the Raiders—Touch Lost by Accident—Perilous British Position.

At this moment Prince Louis of Battenberg resigned the post of First Sea Lord, on the ground that his German parentage might cause difficulties. Though no one had ever doubted his loyalty, and though the nation was in fact indebted to him for guaranteeing a safe passage to France for the Expeditionary Force, his resignation was wise. He was succeeded on October 30 by Lord Fisher, who had at once to face grave issues. The moral effect of the loss of the *Audacious* on the Grand Fleet command was great, like that of the loss of the *Hatsuse* and *Yashima* in 1904 upon the Japanese command. It led Jellicoe in a letter of October 30¹ to announce that he proposed only to fight in the north of the North Sea, and in certain circumstances, if the Germans turned away from his advancing fleet, himself to "assume that the intention was to lead us over mines and submarines," and to "decline to be so drawn."

He proposed, in fact, to adopt strictly defensive tactics. His proposal was approved by the Admiralty on November 7. At that date the British Staff was alarmed by the easy destruction of the *Audacious*, the three *Cressys* and the *Hawke* and *Hermes*; and further, the destroyer force available for duty with the Grand Fleet was dangerously low—not exceeding forty or fifty vessels. If subsequent events proved that the menace from mine and submarine was overestimated and that the British command was guilty of the mistake of

¹ *Jutland Despatches*, p. 601.

"making pictures," it must be admitted that, with the knowledge of 1914 and with many of his ships temporarily ineffective, Jellicoe's course was very natural.¹ The German command displayed a precisely similar anxiety, though in view of the German inferiority in battleship strength this attitude on its part was easier to defend. Yet a bold movement of the High Seas Fleet to the Straits of Dover while the British battle fleet was in the Atlantic might have brought the collapse of the whole Allied left in France and the destruction of the Allied naval forces at Dover might even have ended the war.

One of Fisher's first acts was to secure the proclamation of the North Sea as a military area, the proclamation taking effect from November 5. This was in reprisal for the lawless German mine-laying proceedings. Neutral vessels en route for Denmark, Holland, Norway and the Baltic were advised to call at Dover, where they were given sailing directions and a safe course up the East Coast to Farne Islands, whence a line was left open for them to Lindesnaes in Norway. They were warned not to come inside a line drawn from the north of the Hebrides through the Faeroes to Iceland. As no protest had been made by neutrals against the German mine-laying in non-territorial water north of Ireland, they accepted the British proclamation without objection. The British action necessarily inconvenienced neutrals, but it did not, like the German action, threaten them with a terrible death.

A number of dummy ships resembling warships of the most powerful type had been secretly constructed for the British Navy, and these vessels perhaps contributed to the paralysis of the German Fleet. At the very time when the British Dreadnoughts were far away in the Atlantic, the German command received reports from observers that battleships, armoured cruisers and whole squadrons were on the British East Coast from the Thames to Inverness.² At the end of October, however, Ingenohl, commanding the High Sea Fleet, obtained William II's permission to carry out a mine-laying operation off Yarmouth covered by the German cruisers and battle cruisers. Ingenohl had been once more refused leave to risk a battleship engagement, but

¹ Of his twenty-four Dreadnought battleships one had been lost, two were newly commissioned and not effective and four had defects, leaving only seventeen available. Of his six battle cruisers one was in dock, leaving five available. The German force at this date was fifteen Dreadnought battleships and four battle cruisers, *plus* the *Blücher*. *Grand Fleet*, p. 153.

² *Nordsee*, ii, p. 256.

had been told that he could employ his battle cruisers in the North Sea to damage the British.

Early on November 3, the old British torpedo gunboat *Halcyon*, on mine-sweeping duty, was sighted by a German squadron which under Hipper had approached the British coast. Hipper's force consisted of the battle cruisers SEYDLITZ, MOLTKE and VON DER TANN, the armoured cruiser BLÜCHER and the light cruisers STRASSBURG, GRAUDENZ, KOLBERG and STRALSUND. They saw the British vessel off Smith's Knoll, north-east of Yarmouth, and opened fire on her; she turned away and was probably saved by the destroyers *Lively* and *Leopard* in her company, which put up an excellent smoke screen. The Germans did not pursue her, fearing she was trying to draw them on a mine-field, and she escaped with 3 wounded and some small damage, having sent out an alarm message by wireless.

About 8.30 a.m. shells began to fall on the sand at Yarmouth. The weather was misty and from the shore nothing could be seen; the German fire was quite ineffective, but under cover of it a considerable minefield was laid, and in that minefield the British submarine *D 5* was lost with twenty-one of her crew, as she was hurrying out of Yarmouth to attack the Germans. She struck a floating mine which the Germans had laid and of her crew only two officers and two men escaped. The most important result of this operation was that the 3rd Battle Squadron (eight pre-Dreadnoughts of the *King Edward* class) was thenceforth based on Rosyth with the 3rd Cruiser Squadron (four armoured cruisers of *Antrim* class) to be ready to meet a German attack on the East Coast. Had the Germans moved in force this detachment was much too weak and would almost certainly have been destroyed.

On November 4 the German armoured cruiser YORCK (9,350 tons, launched 1904), in a dense fog struck two German mines while she was proceeding up the Jade for repairs at Wilhelmshaven. She sank with the loss of about 250 men, 381 of those on board being rescued.

It was at this juncture, when the Germans were showing activity, when Jellicoe's Dreadnoughts were weakened by ships undergoing repair, and when Scapa was not yet safe, that Fisher detached the three battle cruisers to deal with Spee, so that the boldness of his temper may be understood. He immediately took in hand an enormous shipbuilding programme as part of a scheme he had adopted for a British

naval movement in the Baltic. In addition to thirty-seven monitors and 290 motor barges and barges for landing troops the ships to be built were five huge cruisers,¹ of 33 knots speed and light draught, two light cruisers, five flotilla leaders, fifty-six destroyers, sixty-four submarines, twenty-four submarine destroyers, nineteen whaling steamers, fifty seagoing patrol boats, thirty-six sloops (used mainly for mine sweeping) and twenty-four river gunboats. He was limited in the designs of these ships by conditions which the Cabinet unwisely imposed under the delusion that the war would be over before 1916; no vessel which could not be completed by the end of 1915 was to be laid down. He also obtained a large programme of aircraft including "blimps" or small airships.

In the North Sea the difficulty of meeting the German mine and submarine war was to some extent overcome by employing on a vast scale small craft from the merchant service and fishing fleet; trawlers and drifters were organised and given a hasty and very imperfect armament—often nothing more than rifles—and an auxiliary patrol of seventy-four yachts and 462 trawlers and drifters was created in November, 1914, in addition to motor boats for submarine hunting. This force rapidly expanded; it was manned by fishermen and yachtsmen and it proved of extraordinary value, as quite a small gun was capable of inflicting serious injury on the submarines of this period.

The German U boat operations showed the increasing menace of the submarine and the ever-advancing radius of its action as improvements were introduced. On November 23, 1914, just after the Grand Fleet had put to sea for a demonstration towards Heligoland, U 18 (Lieut.-Commander Hennig) made her way up Hoxa Sound, the southern entrance to Scapa Flow, and examined the interior of the Flow, but saw it was empty of important warships. She was detected, chased, and her periscope tube was rammed by the British destroyer *Garry*. U 18's diving control gave out; the boat alternately dived madly and flew to the surface; she was caught and badly rammed by a trawler and was finally driven to the surface near the Pentland Skerries, where her crew with the exception of one man were rescued by the British after the boat had been scuttled. A second submarine, U 16, also reconnoitred Scapa from the south entrance and failed to find any sign of the Grand Fleet.

¹ *Repulse, Renown, Courageous, Furious and Glorious.*

It happened that the Grand Fleet at this very moment was moving to a point seventy miles west of Horns Reef with the object of supporting the British light craft, which were to cover an aerial operation against the German Zeppelin sheds on the Bight of Heligoland. At the last minute the Admiralty decided that the Germans were too much on the alert for the air attack, but Jellicoe none the less determined to carry out a sweep of the Bight. The German battle cruisers, after a sally to exercise the new vessel *DERFFLINGER*, had just got back to port, and the British sweep was ineffective. Despite their aircraft and submarines the Germans never discovered the strength of the force which had moved against them.

As on the British side the predilection for the defensive gained ground till such time as Fisher's plans should be complete, old ships and monitors were distributed among the East Coast ports to give some protection against raiders. The ever-increasing activity of the U boats was a constant source of anxiety. On October 20, 1914, the old British steamer *Glitra* was brought-to and sunk by U 17 (Lieutenant Feldkirchner) fourteen miles from the Norwegian coast, but the submarine towed the boats with the crew some distance towards land.

This was an event of historic importance as it was the first instance of a merchant vessel being stopped and sunk by a submarine. It was followed by a rapid extension of U boat attacks on Allied merchantmen, affecting even the main communications of the British army in France, as on November 2 U 21 (Lieut.-Commander Hersing) sank the British steamer *Malachite* off Havre. To add to the difficulties of the Allied navies Joffre on November 20 asked for naval co-operation with the French and Belgian forces at Nieuport. Two days later Hood bombarded the German batteries in the old battleship *Revenge*, which had been fitted with a "bulge." Her ancient 13.5-inch guns had been relined and reduced to 12-inch calibre; they had a range of 16,000 yards which could be increased by heeling her, but owing to her heavy draught she was not able to get close enough to the coast to do what was required.

The Germans at once replied to her with so much effect that the risks run were obviously not worth the small result obtained. At the end of November a further request for help was made by the French military authorities and Hood complied, but on December 16 the *Revenge* was hit below the water-line and considerably damaged. On November

26 the British Navy suffered another blow. The old battleship *Bulwark* at 8 a.m. blew up in the Medway with a terrific report, and of her crew of 800 only 14 escaped death in the explosion, certain of these afterwards succumbing to their injuries.¹

The increasing activity of the German Fleet was another cause of British anxiety. After the demonstration at Yarmouth the German command decided to use its battle cruisers to bombard Hartlepool, Scarborough and Whitby. It believed the Grand Fleet was lying in bases remote from submarine attack, and it hoped by this scheme of operations against the British seaports to force Jellicoe's ships to re-enter the North Sea, when it hoped there to assail them with U boats. The whole battleship strength of the High Sea Fleet was to move out to the centre of the North Sea, to be ready to support the cruisers.

The vessels to take part in the bombardment were the SEYDLITZ (flag of Rear-Admiral Hipper) MOLTKE, BLÜCHER, DERFFLINGER and VON DER TANN, with four of the pick of the German light cruisers. The German Admiralty had begun to suspect that British battle cruisers had been detached to deal with Spee, as was actually the case, and it therefore argued that the British force in the North Sea would be weaker than usual. Undoubtedly the best method of supporting Spee was for the German Battle Fleet to act vigorously in the North Sea, but the cruel and purposeless slaughter of civilians planned in the bombardments was not worthy of a great navy or a great nation, and no special pleading such as the German Official History employs can disguise that fact.²

Various circumstances prevented the Germans from carrying out their plan before December 15, very early on which day Hipper put to sea. The British had already detected wireless signs of German activity and had begun to take counter-measures, mainly with the object of preventing a raid on the Channel or an attempt to land in Suffolk or Essex. On December 14 and 15 the four available British battle cruisers at Cromarty under Beatty put to sea with seven destroyers of the 4th Flotilla; from Scapa the 1st Light Cruiser Squadron and the six available battleships of the 2nd Battle Squadron left in terrific weather, under Vice Admiral Sir G. Warrender. The 3rd Cruiser Squadron

¹ See i. p. 306.

² On the legal issues, see Garner, i, p. 425.

was ordered by Jellicoe to join this force and to put to sea from Rosyth.

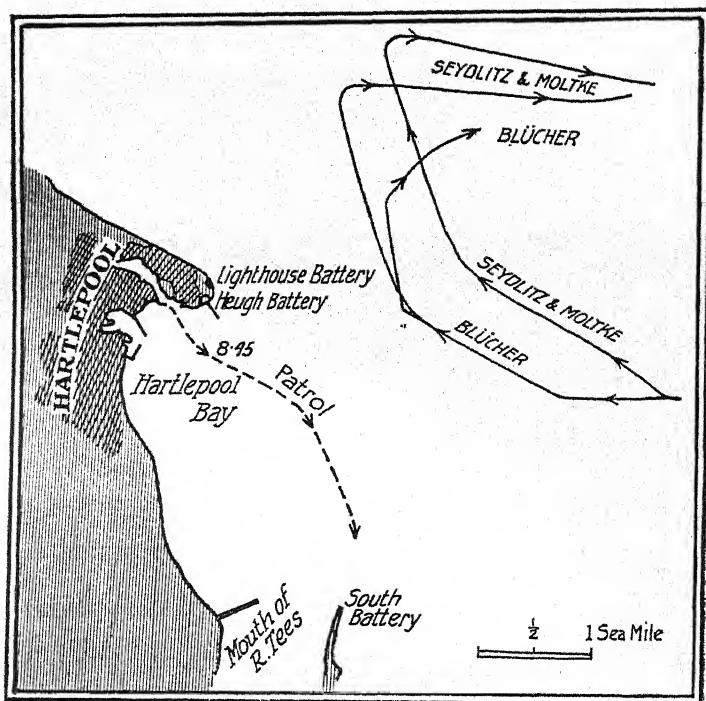
The aim was to get behind the Germans, if they came to the British coast, and to cut them off. Jellicoe was informed by the Admiralty that the German battleships were "very unlikely to come out," which was a dangerous delusion and one that might well have led to disaster. Besides these forces Tyrwhitt's four light cruisers and two destroyer flotillas from Harwich were ordered to a point off Yarmouth, whence they were to try to get into touch with the Germans. Owing to the heavy seas Tyrwhitt's flotillas remained off Yarmouth, but his light cruisers pushed boldly north. The rendezvous for the British was fixed about 110 miles east of Flamborough Head for 7.30 a.m. of December 16. The rendezvous for the battleships of the German High Sea Fleet as it happened was almost exactly thirty miles north of this point, and the hour 6 a.m. of the 16th.

It will be observed that, as the Germans expected, the British moved in detail, and were in danger of being caught by the whole German force, with eighteen German Dreadnoughts¹ against the British ten—though the German Battle Fleet was hampered by the Kaiser's ban upon fighting a decisive battle—and 160 heavy German guns (11 and 12-inch) against 92 British (12 and 13.5-inch). The British disposed a line of seven British and one French submarines, extending twenty-five miles north-east from Terschelling, and the Germans had a group of three U boats east of the Humber. The British patrols and local destroyer flotillas were alarmed and on the alert.²

After Hipper with his four battle cruisers, the BLÜCHER, four light cruisers and two destroyer flotillas, followed the main force of the High Sea Fleet under Ingenohl, consisting of fourteen Dreadnought battleships, eight old battleships, two armoured cruisers, six light cruisers and fifty destroyers. The British Staff apparently supposed that in any case the British detachment would be able to get away from the German battleships, attributing to the British ships a superiority in speed which they did not possess. The six German battleships of the KAISER class were in reality slightly faster than the six British battleships of the 2nd Battle Squadron, so that, had touch between the two battleship forces once been obtained, a severe British defeat was

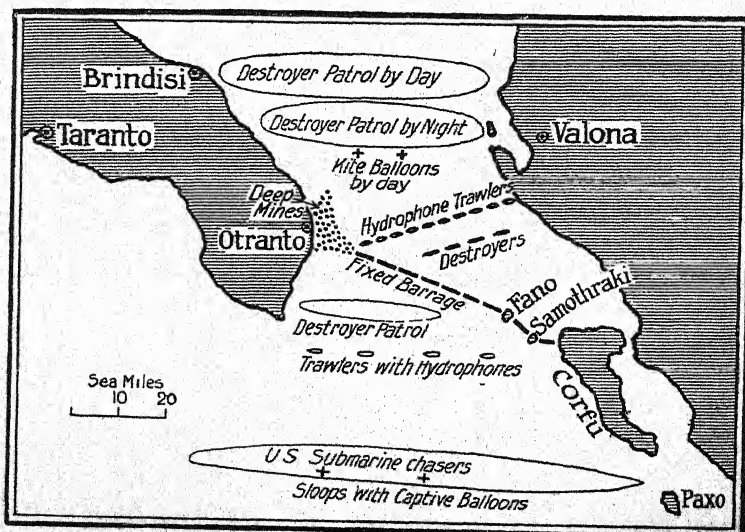
¹ Counting battle cruisers as Dreadnoughts.

² See Table p. 91-2 for the two forces.



BOMBARDMENT OF HARTLEPOOL, 1914

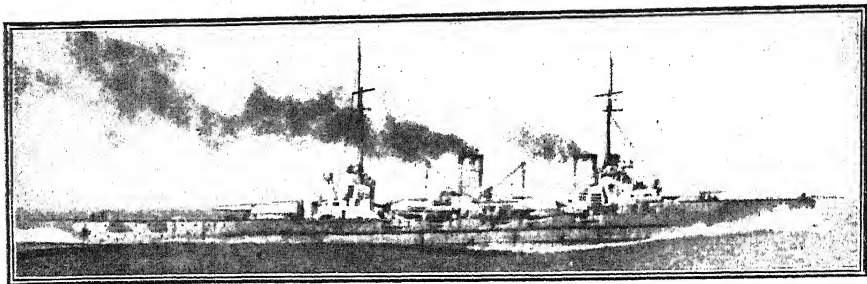
The British guns, though comparatively weak inflicted some damage and loss on the German ships.



THE OTRANTO BARRAGE IN 1918

[See p. 301

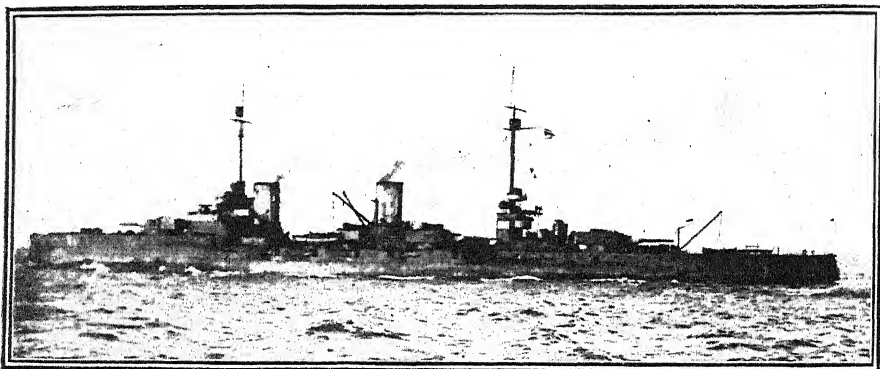
This shows the final form taken by the Adriatic barrage: but despite all these arrangements, German submarines managed to get past.



By kind permission of the Daily Graphic]

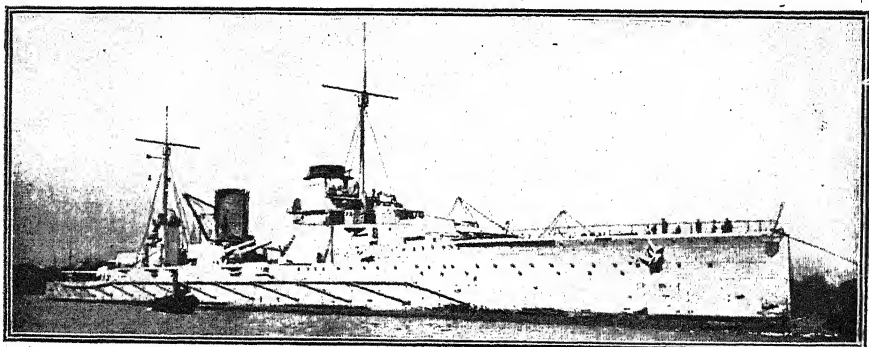
THE GERMAN BATTLE CRUISER "VON DER TANN"

She engaged the *Indefatigable* at Jutland and sank her in 17 minutes. Later in the battle she was heavily hit and her heavy guns were all for a time put out of action. [See p. 140



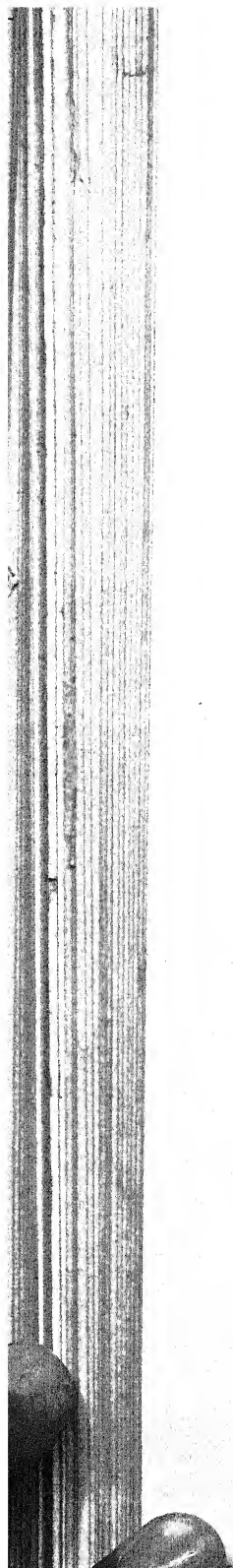
THE GERMAN BATTLE CRUISER "MOLTKE"

She was at Jutland, where she was least damaged of all the German battle cruisers. To her, late in the battle, Hipper shifted his flag.



THE GERMAN BATTLE CRUISER "SEYDLITZ"

Fought at the Dogger Bank, where she narrowly escaped destruction, and at Jutland where she was repeatedly hit and also struck by a British torpedo. After the battle she was for 24 hours in great danger. [See pp. 183-4



1914]

HARTLEPOOL BOMBARDED

probable from the German superiority in numbers, gun power and protection.

The German operations proceeded according to plan despite the heavy sea that was running. Hipper sent back all his light craft except the *KOLBERG* because of the high seas and passed through the gap between the two mined areas off the Tyne and Humber, about the level of Whitby. With the *SEYDLITZ*, *MOLTKE* and *BLÜCHER* he then steered for Hartlepool. At 8 a.m. of December 16 the British destroyers *Doon*, *Waveney*, *Test* and *Moy*, patrolling off Hartlepool in thick stormy weather, suddenly observed three large ships which opened fire on them and straddled them almost at once, before they could get within torpedo range. There was no other course for the destroyers but to retire. The German ships next opened fire on the town and port at a range of about 4,000 yards, straddling the British light cruiser *Patrol*, which was just coming out, and threatening with destruction the British submarine *C 9*, which was forced by a hail of shells to dive on the bar and thus escape the enemy's projectiles. The coast defences which mounted three 6-inch guns, two in the Heugh Battery and one in the Lighthouse Battery, replied with some effect and made eight hits on the German ships, killing 9 men and wounding 2 in the *BLÜCHER*, and wounding 1 man in the *SEYDLITZ*. One of the hits put two 3.4-inch guns out of action in the *BLÜCHER* and destroyed a quantity of ready ammunition, which, fortunately for the Germans, did not explode.

At 8.50 the Germans steamed away. They had seriously damaged the *Patrol* which had 4 killed and 7 wounded, and the destroyer *Doon* lost 3 killed and 6 wounded. In the two batteries, which were most gallantly worked despite the difficulties caused by dense clouds of dust and the heavy German fire, 9 men were killed and 12 wounded of the Durham Garrison Artillery and 18th Durham Light Infantry. In the town great damage was done with no real justification; seven churches, ten public buildings and over 300 houses were wrecked or hit; and in the docks four ships were hit and two important engineering establishments were damaged. Of non-combatants 86 were killed and 424 wounded; among the dead were fifteen young children.

The bombardment of docks and engineering works and the attack of batteries were entirely permissible operations. But it has always been the custom of honourable war not to inflict unnecessary injury on non-combatants and it is quite

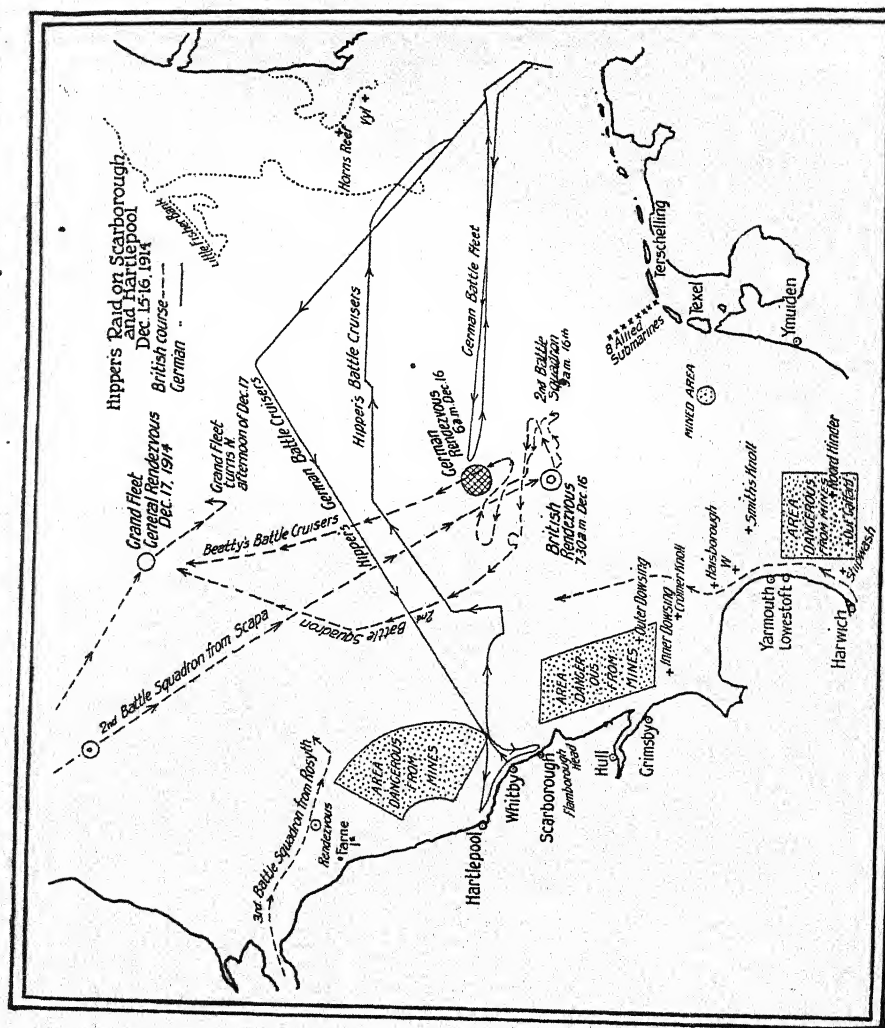
certain that the Germans deliberately trained their guns on the town. The two batteries discharged only 123 shells. The number of rounds fired by the Germans was 1,150, of heavy, medium and light calibre.

At 8.0 the German ships DERFFLINGER, VON DER TANN and KOLBERG appeared off Scarborough, an undefended port, and while the KOLBERG laid a mine field across the channel along the British coast which was kept swept and clear for traffic inshore, the other two opened fire on the coastguard station, the empty barracks and the town. For thirty minutes they maintained this fire and then steamed off north to Whitby where they shelled the coastguard station and hit the Abbey, disappearing after about ten minutes' firing, soon after nine. At Scarborough 776 rounds were fired by the Germans, and 18 non-combatants were killed and over 100 wounded. At Whitby 188 6-inch and 3.4-inch shells were fired and 2 non-combatants were killed and 6 wounded while considerable damage was done to the west door of the Abbey.¹ The German battle cruisers were thenceforward known as the "baby-killers," from the number of children who had fallen to their fire in their not very glorious exploit.

Immediately he learned by an intercepted wireless signal of the bombardment of Scarborough and Hartlepool, Jellicoe ordered the whole remainder of the Grand Fleet at Scapa to put to sea, steaming towards the Bight of Heligoland. He also ordered the 3rd Battle Squadron (of *King Edwards*) to put to sea from Rosyth in order to catch the Germans if they came northwards along the British coast. His action was exceedingly judicious, but it would not have made good the initial mistake of the Admiralty in failing to order the whole Grand Fleet to move at the outset, if the Germans had meant fighting.

As it was, through a strange series of mischances they escaped, which perhaps was fortunate for the British in view of the weakness of the British force. At midnight of December 15-16 the German battle cruisers and light craft with them going west passed just ahead of the British force near the Dogger Bank, narrowly avoiding contact. The British force was sweeping a front of thirteen miles, and moving to a position behind the advancing enemy. At 5.15 a.m. of December 16 the seven destroyers with the British force encountered the German destroyer V 155 (30 knots, 530

¹ P. Hood, *Whitby Abbey*, p. 18.



PLAN 29

THE NORTH SEA AND HIPPER'S RAID ON SCARBOROUGH

[p. 88

This shows the general position of the minefields in 1914 and early 1915. They changed continually and grew in number.

tons, two 3.4-inch guns) in advance of the ships screening the main strength of the High Sea Fleet, and while it was still dark engaged her.

The sea was exceedingly high and despite their great superiority in armament the British boats *Ambuscade* and *Lynx* were damaged while the V 155 escaped unscathed. Once more German gunnery achieved much better results than the British. The wireless signals of V 155 brought up the light cruiser HAMBURG with two more German destroyers and there was a sharp interchange of fire at 1,500 yards. The British torpedo craft failed to use their torpedoes with any effect, though one was discharged by the *Hardy*. The HAMBURG was hit twice and had 4 casualties, but she made several hits on the *Hardy* and that vessel had 2 killed and 15 wounded. Each ship reported it had sunk the other. The news that British destroyers were in the vicinity of his fleet led Ingenohl to turn to the south-east at 5.42 with his battleships, in order to avoid torpedo attack, and thus left his battle cruisers unsupported.

A third brush with the Germans took place at 6.20 when the ROON, now forming the rearguard of the High Sea Fleet with five destroyers, sighted the British destroyers *Unity* and *Lynx*, but the two antagonists parted without opening fire. A little later the ROON was again sighted and chased by four British destroyers led by the *Shark*. The British kept touch for more than half an hour, endeavouring to get wireless signals through to Beatty and Warrender, till a threatening movement of three German light cruisers forced them to draw off. Throughout these encounters the Germans jammed the British wireless signals and thus prevented information from reaching the British admirals. Once more that day the combatants were in contact. About 11.30 the *Southampton* (flag of Commodore W. E. Goodenough) sighted the light cruiser STRALSUND with a number of German destroyers and gave chase. Beatty with the battle cruisers was four miles astern, and the British at that moment were steaming westward.

The *Birmingham* joined in the pursuit of the Germans, who went off at their best speed southward. Goodenough signalled to Beatty that he was engaged with a German cruiser and destroyers and it looked as if a serious action was imminent. At this precise moment a signal was made by the *Lion*, Beatty's flagship, directing the light cruisers to "resume look-out position and take station ahead of the

battle cruisers." It was intended for the *Nottingham* and *Falmouth* only—to keep Beatty's screen in position to the north and give him a better chance of gaining contact with Hipper. But it was taken in by Goodenough's ships and obeyed by them with the result that the Germans got away. It is a question whether the commander of the light cruiser squadron should have acted on his initiative and maintained contact, but in this case it was reasonable for him to conclude that some important object had led Beatty to send such a signal. The need for definiteness and accuracy in signals is strikingly indicated by this episode.

While the German Battle Fleet went off to the south-east the German battle cruisers, warned by their light cruisers of the exact position of Beatty, made a sweep northwards and thus eluded him. Nor were the British submarines more successful than the heavy British ships; though two *E* boats sighted and attacked German battleships, both attacks failed. Thus from the German standpoint the operation was a distinct success. For the first time since the Dutch wars an enemy had inflicted casualties on British soil, and it was no great consolation to be assured, as was the case, that the German bombardments of residential areas and undefended ports were contrary to the spirit or the letter of the laws of war. Even the German command had qualms as was shown by William II's secret order to his navy to avoid unnecessary injury to private property, issued on December 31.¹

From the British standpoint it was perhaps fortunate that Beatty did miss Hipper, as Hipper's tactics would certainly have been to lead the British battle cruisers to the High Sea Fleet battleships. The Germans with the *BLÜCHER* would have had a superiority in battle cruiser force and there would have been no overwhelming British battle fleet, as at Jutland, to intervene. The irritation in the German Fleet at the great chance which had been lost by Ingenohl's excessively cautious tactics which were due, be it remembered, to William II's orders and which had led him to turn prematurely to the south-east at 5.42 a.m., grew with subsequent information as to the British arrangements. "Ingenohl," wrote Tirpitz, "had the fate of Germany in his hand: I burst with indignation whenever I think of it."² Throughout the Germans were aided by thick weather, as there were only brief intervals when the visibility was good.

¹ *Nordsee*, iii, p. 120.

² *Erinnerungen*, p. 437.

After this affair Beatty's Battle Cruiser Force was stationed at Rosyth, and an air attack on the German Zeppelin sheds was planned by way of reply. It took place on Christmas Day with the support of the whole Grand Fleet and Tyrwhitt's cruisers and flotillas. Nine seaplanes conveyed in aircraft carriers were employed, but the results were negligible and on the return of the fleet to Scapa in a violent storm the battleships *Conqueror* and *Monarch* collided so badly that they were not again ready for sea for some weeks. Fortunately the new battleships *Emperor of India* and *Benbow* were available to take their place.

Another mishap befell the British Navy in this period. On January 1, 1915, the *Formidable* was torpedoed by U 24 (Schneider) while carrying out exercises at low speed and unscreened off Portland with the 5th Battle Squadron under Vice-Admiral Sir L. Bayly. There was a heavy sea running and the ship was twice hit by U 24; she remained afloat for about two and a half hours, but owing to the seas and the risk of fresh attack by the submarine, her commander, Captain Loxley, with 35 officers and 512 men perished. A launch with seventy men on board was rescued by the gallantry of the crew of the Brixham trawler *Provident*. For failure to order proper precautions against submarine attack Bayly was removed, though he pointed out with some reason that his action in exercising the squadron without a destroyer screen was due to orders issued by the Admiralty.

GERMAN FORCE ENGAGED IN THE SCARBOROUGH-HARTLEPOOL RAID

BATTLE CRUISERS.

	Tons.	Speed.	Broadside.	
Seydlitz ...	24,610	26.7	10 11-in., 6 6-in.	} 8 12-in., 28 11-in. 23 6-in. broadside
Derfflinger	26,180	28.0	8 12-in., 7 6-in.	
Moltke ...	22,640	27.2	10 11-in., 6 6-in.	
Von der Tann	19,100	26.0	8 11-in., 5 6-in.	

BATTLESHIPS.

IIIrd. Squadron	Fried. der			
	Grosse	24,410		
	Prinzregent			
	Luitpold	24,410		
	Kaiserin ...	24,410	each	
	Kaiser ...	24,410	23.0	10 12-in., 7 6-in.
	König Albert	24,410		} 60 12-in., 36 6-in. broadside
	Grosser Kur- fürst	25,390	23.0	10 12-in., 7 6-in.

BATTLESHIPS IN ACTION

[1914

German Force Engaged in the Scarborough-Hartlepool Raid—continued

BATTLESHIPS.

	Tons.	Speed.	Broadside.	
1st. Squadron	22,440	20.5	8 12-in., 7 6-in.	32 12-in., 28 6-in.
1	18,600	20.0	8 11-in., 6 6-in.	32 11-in., 24 6-in.
	12,997	19.0	4 11-in., 7 6.7-in.	

ARMOURD CRUISERS.

Blücher ... (with battle cruisers)	15,500	22.5	8 8.2-in., 4 6-in.
Roon ...	9,350	21.0	4 8.2-in., 5 6-in.
Prinz Heinrich	8,760	20.0	2 9.4-in., 5 6-in.

LIGHT CRUISERS.

2	Stralsund ...	4,470	26.0	each 6 4.1-in.
	Graudenz ...	4,900	28.0	
	Strassburg	4,470	26.9	
	Kolberg ...	4,280	26.3	
	Rostock ...	4,820	28.0	
	Hamburg ...	3,200	23.0	each 5 4.1-in.
	Stuttgart ...	3,400	23.0	
	München ...	3,200	23.0	
	Danzig ...	3,200	23.0	
	Frauenlob	2,670	21.0	

DESTROYER FLOTILLAS. II, VI, VII, VIII, IX.

BRITISH.

BATTLE CRUISERS: Lion, Queen Mary, Tiger, New Zealand, (twenty-four 13.5-in., eight 12-in., six 6-in., broadside, 27 knots, 18,800-28,000 tons).

BATTLESHIPS: King George V, Orion, Ajax, Conqueror, Centurion, Monarch (sixty 13.5-in., 21 knots, 22,500-24,000 tons).

ARMOURD CRUISERS: Antrim, Argyll, Devonshire, Roxburgh (twelve 7.5-in., twelve 6-in., 22 knots, 10,850 tons).

LIGHT CRUISERS: Southampton, Nottingham, Birmingham, Falmouth, twenty 6-in., 26 knots, 5,250-5,440 tons.

7 destroyers of 4th Flotilla (32 knot oil fired boats).

TYRWITT'S FORCE: 4 light cruisers, Arethusa, Aurora, Undaunted, Fearless (26-30 knots, six 6-in., fifteen 4-in.).

About 30 destroyers.

¹ 11nd. Squadron.

² With the battle cruisers.

CHAPTER XXII

First Zeppelin Raids on England—Hipper Moves out to the Dogger Bank—Beatty in Touch—Battle of the Dogger Bank—"Seydlitz" Badly Hit—Beatty's Flagship Badly Damaged—"Blücher" in Extremis—"Lion" Drops Astern—Battle Broken Off—Hits and Casualties—Fisher Dissatisfied—U Boat Campaign Extends—Blockade of Britain Proclaimed—Monthly Sinking of Ships—"Falaba" and "Lusitania" Submarined—Effect on Neutrals—British Counter-Blockade of Germany—"Baralong" Affair—Capture of German Oversea Bases—Kiaochau Besieged—Its Surrender—Naval Action in Mesopotamia—Cruise of the "Meteor"—Belgian Coast Bombardments—Cruise of the "Möwe" and "Greif"—"Arabis" Sunk—Scheer Commands the High Sea Fleet—Moves to Terschelling—Skirmish in the Bight.

IN January, 1915, the German Staff obtained from William II permission for the High Sea Fleet to make sallies into the North Sea of a more extensive type, with the object of drawing out and cutting off British forces in detail. The Kaiser also agreed that Zeppelins might bomb English towns provided London was spared;¹ attacks on the London docks were expressly sanctioned. On January 19 and 20 the first Zeppelin bombs were dropped in the eastern counties of England by L 3 and L 4, killing 4 persons and injuring 16, all except one of the casualties being among civilians. This random dropping of explosives with no adequate military object was another transgression of the customs of honourable war, another reminder of British vulnerability to air attack.

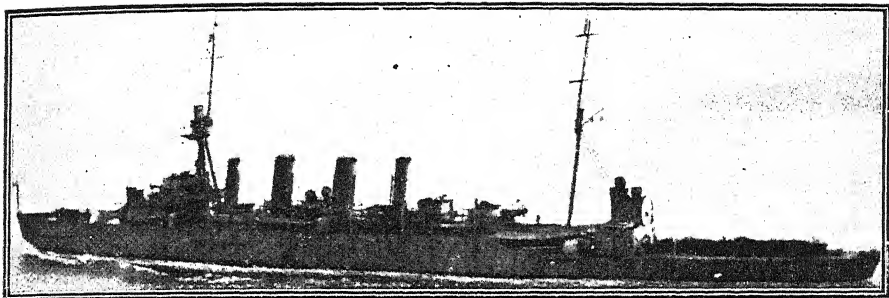
The Grand Fleet was still weakened by vessels undergoing repairs and of its Dreadnought battleships no more than eighteen were effective, with two new ships in addition, neither of them yet fit for the line of battle, against seventeen effective German Dreadnought battleships when the High

¹ Pohl, *Aus Aufzeichnungen*, p. 100.

Sea Fleet was complete. In mid-January the 3rd Battle Squadron of the High Sea Fleet went to exercise in the Baltic, but though it would be unavailable in any emergency Ingenohl determined to send his battle cruisers to the Dogger Bank, to clear that area of suspicious British craft. The VON DER TANN was absent from Hipper's squadron for a refit, so that his fighting force was reduced to the SEYDLITZ, MOLTKE, DERFFLINGER and BLÜCHER. These four ships with the light cruisers GRAUDENZ, ROSTOCK, STRALSUND and KOLBERG, and nineteen destroyers put to sea in the afternoon of January 23; the same evening the British battle cruisers and Tyrwhitt's force also put to sea, followed by the whole available strength of the Grand Fleet.

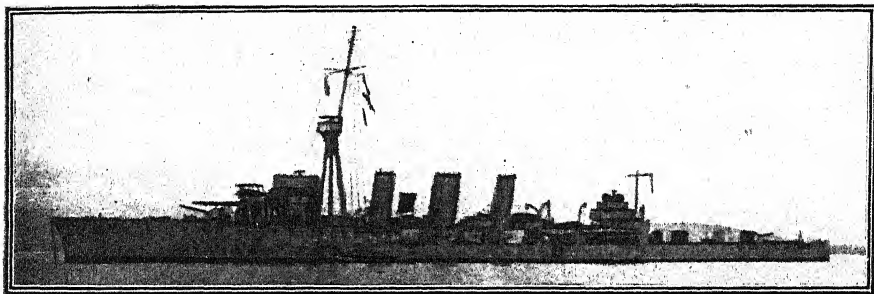
At this period of the war, owing to the quickness of their Staff, the British enjoyed a signal advantage over the Germans. They were generally able to intercept and decipher the German wireless signals, and to base on them the British movements. On occasions the British Staff went wrong in its interpretation of those signals, as for example when it concluded in the Scarborough raid and afterwards at Jutland that the German Battle Fleet was not coming out. But the British command was usually able to ascertain where the Germans were moving and in what strength, while the Germans had no such knowledge of British dispositions and intentions. This peculiar state of affairs is never likely to be repeated in future wars; and if the Germans in 1914-1916 had been more cautious in their employment of wireless, their operations might have been crowned with a far larger measure of success. On the other hand, the Germans had, in their airships, means of obtaining quick and accurate information of which they made curiously unsatisfactory use.

The German dispositions were thoroughly bad in this Dogger Bank affair, and ought to have led to a great German disaster. Ingenohl did not hold his main force ready to support Hipper. He seems to have argued that the Grand Fleet would not come out because on January 19 and 20 it had been engaged in a sweep in the North Sea, and might, therefore, be expected to be busy coaling. His own explanation of his failure to concentrate and take out his battleships was that such action would have attracted attention and put the British on their guard, but this excuse was not accepted by his own government. Meantime an overwhelming force of British ships was moving silently (for abstention from wireless signalling was expressly ordered) towards the



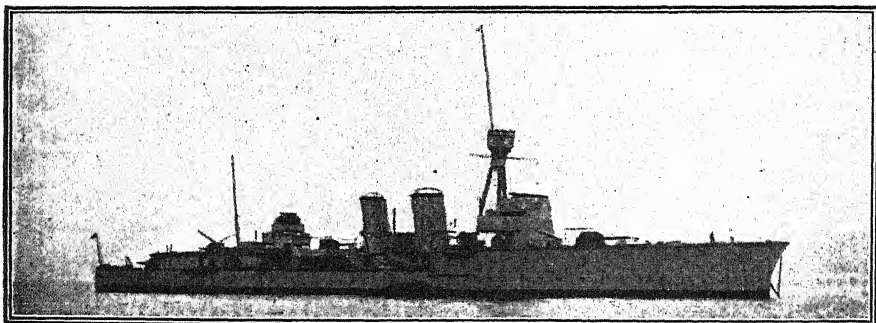
THE BRITISH LIGHT CRUISER "SOUTHAMPTON"

Commodore Goodenough's flagship at Jutland. Her scouting feats in the battle made her famous, as she watched and faithfully reported the movements of the German Fleet. She was terribly hit in the night action. [See pp. 143-4, 165]



THE BRITISH LIGHT CRUISER "UNDAUNTED"

A sister of the *Arethusa* and *Aurora*, which rendered such fine service throughout the war in Tyrwhitt's fast squadron. She aided in sinking a division of German destroyers off the Texel. [See p. 37]



THE BRITISH LIGHT CRUISER "CALLIOPE"

An improvement on the *Undaunted* type, above. She was in service from 1915 onwards and was at Jutland as flagship of the 4th Light Cruiser Squadron. She was heavily hit and lost 19 men. [See p. 159]

Dogger Bank, and Hipper was in fact steaming at 15 knots into a trap.

At 7.15 a.m. of January 24 the British cruiser force sighted German ships near the eastern edge of the Dogger Bank, about 180 miles from the Tyne. Beatty had with him the battle cruisers *Lion*, *Tiger*, *Princess Royal*, *New Zealand* and *Indomitable* (the *Queen Mary* was absent refitting); Goodenough's vessels *Southampton*, *Birmingham*, *Nottingham*, *Lowestoft* of the 1st Light Cruiser Squadron; and Tyrwhitt's force of three light cruisers (*Arethusa*, *Aurora*, *Undaunted*) and thirty-five destroyers which was on its way up from Harwich and was just in touch with him. The main force of the Grand Fleet was at this moment moving down the North Sea and had reached the level of Kinnaird Head in Aberdeen; seven pre-Dreadnoughts of the 3rd Battle Squadron from Rosyth were a considerable distance astern of Beatty. At 7.15, while the *Aurora* was steaming north to join Beatty on the Dogger Bank, she sighted the KOLBERG with four German destroyers and was fired upon by that ship. The *Aurora* signalled at once that she was in action with the High Sea Fleet.

She did not answer the German fire for three minutes. At a range of 5,500 yards the Germans made three hits, to which the British replied by making two hits with 6-inch shell and causing 5 casualties in the KOLBERG. The two combatants parted, each falling back on the supporting forces, but shortly afterwards other German ships came into sight of the British, and the *Southampton* caught a glimpse of the German battle cruisers to the south-east. They had turned, as soon as the KOLBERG reported contact with the British, and were steaming at 15 knots back on a course to Heligoland. Hipper informed Ingenohl by wireless that he had on his port quarter four cruisers of the *Chatham* class and astern three British small cruisers and twenty-six destroyers, behind which could be seen several clouds of smoke (from ships in swift movement). The wind was east with a touch of north, force Three to Four, the sky overcast, and the sea moderate; visibility ranged from eight to ten miles.

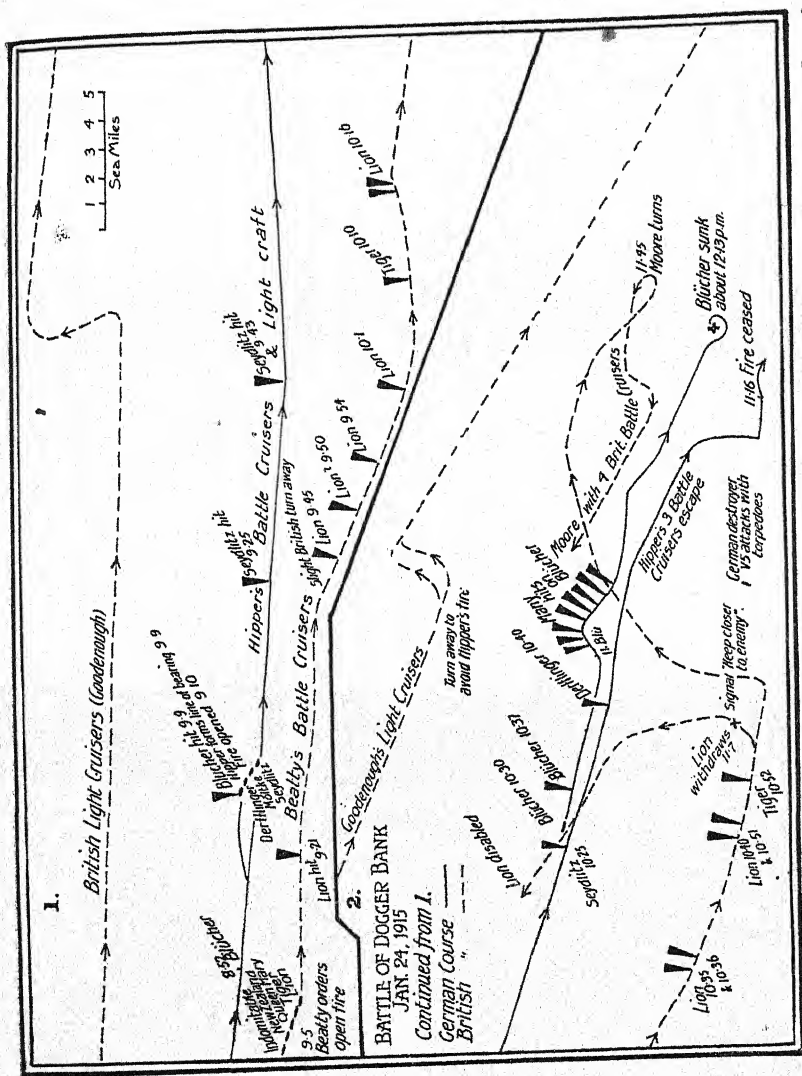
As the British rapidly gained, Hipper raised his speed. At 8.25 the BLÜCHER, which was last ship in his line, fired several salvos from her stern 8.2-inch turrets at a group of British destroyers which was drawing up fast, and drove them off. The British light cruisers bore away to the east to keep outside

range, but maintained touch. Though Hipper raised his speed to 21 knots Beatty's battle cruisers continued rapidly to gain on him and their giant outlines showed on the far horizon. Beatty stood to starboard of the Germans, to get between them and their bases, while Goodenough with the light cruisers kept to port avoiding the direct track of the hostile battle cruisers lest they should have laid mines. The destroyers were between the two British squadrons. Beatty raised speed first to 26 knots, next to 27, and then to 28; and nearer and nearer drew the mighty ships of the two sides. At 8.52 Beatty ordered 29 knots, though this was beyond the real pace of his ships. But it was the kind of order which, in presence of an enemy, stirs crews to the utmost; and magnificently the British battle cruisers answered the appeal. None the less the *New Zealand* and *Indomitable* fell astern.

At 8.52 the *Lion* fired her first shot at the BLÜCHER at a range of 22,000 yards. It fell short and the British squadron changed its order to a line of bearing so disposed that all the guns in the battle cruisers could come into action. A few more ranging shots were fired before, at 9.5 a.m., Beatty ordered all his ships within range to open. Hipper had also formed in a line of bearing, but owing to the dense smoke from the funnels of the German battle cruisers and destroyers it was most difficult for either combatant to see the other. From the limited elevation of the German guns they were not able to open till 9.10 when the range fell to about 20,000 yards.

The first hit was made about this time by the British on the BLÜCHER; it did no serious damage. Because of the smoke and difficulty of vision there were many changes of target in this period. The *Lion*, *Tiger*, and *Princess Royal* fired principally at the BLÜCHER, till 9.14 when the *Lion* shifted to the MOLTKE. The Germans fired mainly at the *Lion* as they could see her best, and thus there was a concentration on the head of the British line which probably saved Hipper from a severe defeat. His action in placing the BLÜCHER, his weakest ship, last in his line has been much criticised and was a grave mistake, but in the Scarborough raid she had shown herself as fast as the other German ships. The Japanese in their formations usually took care to have a powerful ship at each end of their line of battle.

At 9.35 Beatty signalled to his battle cruisers to engage opposite numbers. In taking up targets, the *Tiger* counting



[p. 96]

DOGGER BANK

The black marks indicate hits by heavy guns with the name of the ship hit. Hits on *Blücher* so numerous that they cannot all be shown. They are not known with certainty.

from left to right, assumed that the sternmost British ship, *Indomitable*, was firing at the BLÜCHER, whereas the *Indomitable* was out of range and should not have been counted. Thus the *Tiger* fired at the SEYDLITZ instead of at the MOLTKE, and the MOLTKE was undisturbed by British shells. This is a condition which conduces to effective shooting, as was proved at Jutland where a similar mistake in taking up targets was made by the British battle cruisers. Moreover, owing to smoke, the *Tiger* soon lost the SEYDLITZ, and thus the German flagship was only engaged by the *Lion*. Tyrwhitt dropped back so as to avoid blanketing the fire of the battle cruisers with his smoke, but it was still extraordinarily difficult to see the Germans.

Two hits, neither of them serious, were made on the DERFFLINGER. At 9.43 a 13.5-inch shell from the *Lion* struck the aftermost barbette in the SEYDLITZ, pierced the armour where it was 9 inches thick, bursting as it pierced, and drove red hot fragments of plating into the working chamber of the after-turret. These fragments set fire to some of the charges there. They blazed up, and the men in the handling room, the compartment below, must have tried to escape through a door in the bulkhead which separated them from the compartments under the neighbouring turret (in the SEYDLITZ there were two turrets close together astern, the forward one of the two firing over the sternmost). At the moment when the door was opened the flash from the burning charges must have caught the ammunition in the hoists and that in the handling room. The blast of roaring flame penetrated to the second turret and there too fired a large quantity of ammunition.

In all, six tons of explosive caught fire. The sheet of flame rose from the two stern turrets "high as a house," and dense smoke poured from them. No answer was returned from them when they were rung up on the telephone. In that terrible sea of fire 165 men were engulfed of whom 159 perished at that moment. But the magazines did not catch fire, nor did the numerous charges which were still in their metal cases explode. The magazines were saved by the bravery of a chief petty officer. The wheels actuating the flooding valves were red hot, but he gripped them and turned them, though they burnt the very flesh off his hands and he suffered cruelly. For some minutes as dense smoke poured from the two turrets, everyone in the SEYDLITZ thought the ship was going to blow up. To do the

utmost injury before she sank, her gunnery officer with admirable coolness ordered quick fire and every ten seconds¹ her heavy guns in the three remaining turrets thundered a salvo, to which the other German ships responded with cheers. The position of the ship, even when the fire was under control, was extremely serious. Her draught aft had increased to 34 feet. She had 600 tons of water in her hull and for the guns in her intact turrets she had at 11.5 only 200 rounds of ammunition available.²

The *Lion*, too, was heavily hit, after a first hit at 9.21 had done little damage. At 9.40 Beatty observed what looked like preparatory movements by the German destroyers to attack, and ordered a slight turn-away for the ships of his squadron, but without increasing the actual range.

In reality, the German destroyers, which were steaming on the starboard or engaged side of Hipper's battle cruisers and somewhat ahead of them, were finding it difficult to keep station ahead of their big ships and were dropping astern. They had no intention of attacking, and a sharp British fire on them and the approach of the British destroyers must have accelerated their pace, while no doubt Beatty's own reduction in speed to 24 knots helped them to get away from him. At 9.45 the *Lion* had a narrow escape from a shell which pierced the 4-inch magazine trunk but did not explode; at 9.54 the roof of the foremost turret was hit and one heavy gun put out of action for some minutes. At 10.18 she sustained a more serious hit which violently shook her hull, stove in an armour plate, damaged the port condenser, and eventually put the port engine out of action. Yet another hit a little before had given her a list to port.

During this stage of the battle the German ships from time to time fired at Goodenough's light cruisers with their port batteries without result, except to force the British light ships to increase their distance. At 10.30 Beatty increased speed to 26 knots to close the Germans once more, and the fighting grew fiercer. The BLÜCHER received a heavy hit from a 13.5-inch shell which pierced the armour deck between her two forward amidships 8.2-inch turrets and set fire to some forty charges in a gangway which ran for one third her length and was used for the transport of ammunition. The flash passed up the hoists to both the turrets killing all in

¹ *Nordsee*, iii, p. 212. If this is strictly correct the speed of fire was extraordinary—three rounds per 11-inch gun per minute. The salvos were presumably fired by one gun per turret as in the British Navy. See also p. 194.

² *Id.*, p. 219.

them, and the ship amidships was a sea of flames. The steering gear was put out of action, and the boilers in No. 3 stokehold were damaged so that the speed fell to 17 knots. A signal was made from her which was read in the SEYDLITZ as running, "All engines out of action."

The BLÜCHER at once dropped astern, though she continued to fire rapidly, and hits on her began to multiply. The *Lion*, however, under the concentrated German fire was also suffering severely and was beginning to fall back in the British line; there were three hits on her between 10.35 and 10.41, one of which set the fore turret magazine on fire. Just as all thought the ship was doomed, the fire was put out and the magazine flooded. The DERFFLINGER was hit but not much damaged about this time, though from the British ships she appeared to be badly on fire. At 11 Hipper ordered the German destroyers to attack; immediately before this Beatty saw what he supposed to be U boats¹ on the starboard bow and turned his squadron first 8 points to port, and then to the north-east which would bring his squadron some 7,000 yards astern of the BLÜCHER without sensibly increasing the distance from the German big ships. The German destroyer attack was never pressed as the British turn placed the German boats at a disadvantage and Hipper recalled his signal. The BLÜCHER sheered out northwards while he turned southwards and abandoned her. His reason was that he expected the British Battle Fleet to arrive and, if he delayed, his three battle cruisers would almost certainly be destroyed. There can be no doubt that he did right to run; his mistake lay in placing the BLÜCHER last in his squadron.

At 11.16 the battle was broken off so far as his ships were concerned. At 11 the *Lion* had dropped astern owing to her injuries, but after the signal "course north-east," Beatty had ordered, at 11.5, "attack the rear of the enemy"; and then, at 11.7, "keep closer to the enemy"²—the exact modern equivalent of Nelson's final signal, "engage more closely." As the *Lion*'s wireless was out of action these signals had to be made by flag-hoists, which in the wind and smoke were

¹ Actually none were near. The German U boats were not employed in combination with surface ships. The turn has been the subject of much controversy. See Bacon, *Jutland Scandal*, pp. 140 ff., 150. ff. In reality it was quite unimportant.

² The signal was not clear as it did not state whether "the enemy" meant the BLÜCHER, or Hipper's remaining three ships. Yet Beatty obviously meant the three ships with Hipper. In the Battle Cruiser Force the custom was to work as far as possible by initiative of subordinates, with the minimum of signals.

difficult to see. The last signal was not taken in at all by the other battle cruisers, and the first was read, "attack the enemy's rear bearing north-east." Rear-Admiral Sir A. Moore with his flag in the *New Zealand*, who succeeded to the command when the *Lion* was out of action, therefore did not follow Hipper but proceeded to complete the destruction of the helpless BLÜCHER, precisely as years before Kamimura turned with his armoured cruisers to finish off the smitten Rurik and allowed the *Rossia* and *Gromoboi* to escape. Neither acted on the vital principle that the annihilation of the enemy's main force is the object of battle.

This defective signalling, coupled with absence of initiative and literal obedience to signals, permitted the three German battle cruisers to get away. Contrary to the British belief at the time, only one of the three was much damaged—the SEYDLITZ—and her speed did not fall below 21 knots. The MOLTKE had not been hit at all; the DERFFLINGER only once. The BLÜCHER, like the Suvaroff, displayed astonishing power of endurance, and she continued firing till 12.13 p.m. when she sank, after being hit by seven torpedoes and from 70 to 100 heavy shells, her crew maintaining a most gallant resistance to the last. Her captain, Erdmann, was among the dead.

While the British small craft were busy rescuing her crew, as she lay on her beam ends, the German aeroplane No. 83 flew over her and dropped bombs, before the airman had observed that she was a sinking ship and German in nationality. This action increased the German loss in drowned. Zeppelin L 5 was also hovering above the course of battle, but neither the Zeppelin nor the aeroplane brought the German command any information of real value. Meanwhile as the *Lion* fell more and more astern Beatty with his staff left her in the destroyer *Attack*, and followed in the course of his squadron. He did not meet it till noon, when it was returning, having given up all effort to pursue the remaining German ships. At 10.3 that morning Ingenohl had signalled by wireless to Hipper and his message had been read by the British: "Main force and flotillas coming out as soon as possible."¹ But this gave no reason for alarm: the Grand Fleet on the British side was coming up, and the High Sea Fleet was known to be without its best Dreadnoughts. The

¹ *Nordsee*, iii, p. 285. The last four words of the signal were not known to the British, because either some new cipher was used or the wireless instruments failed to take them in.

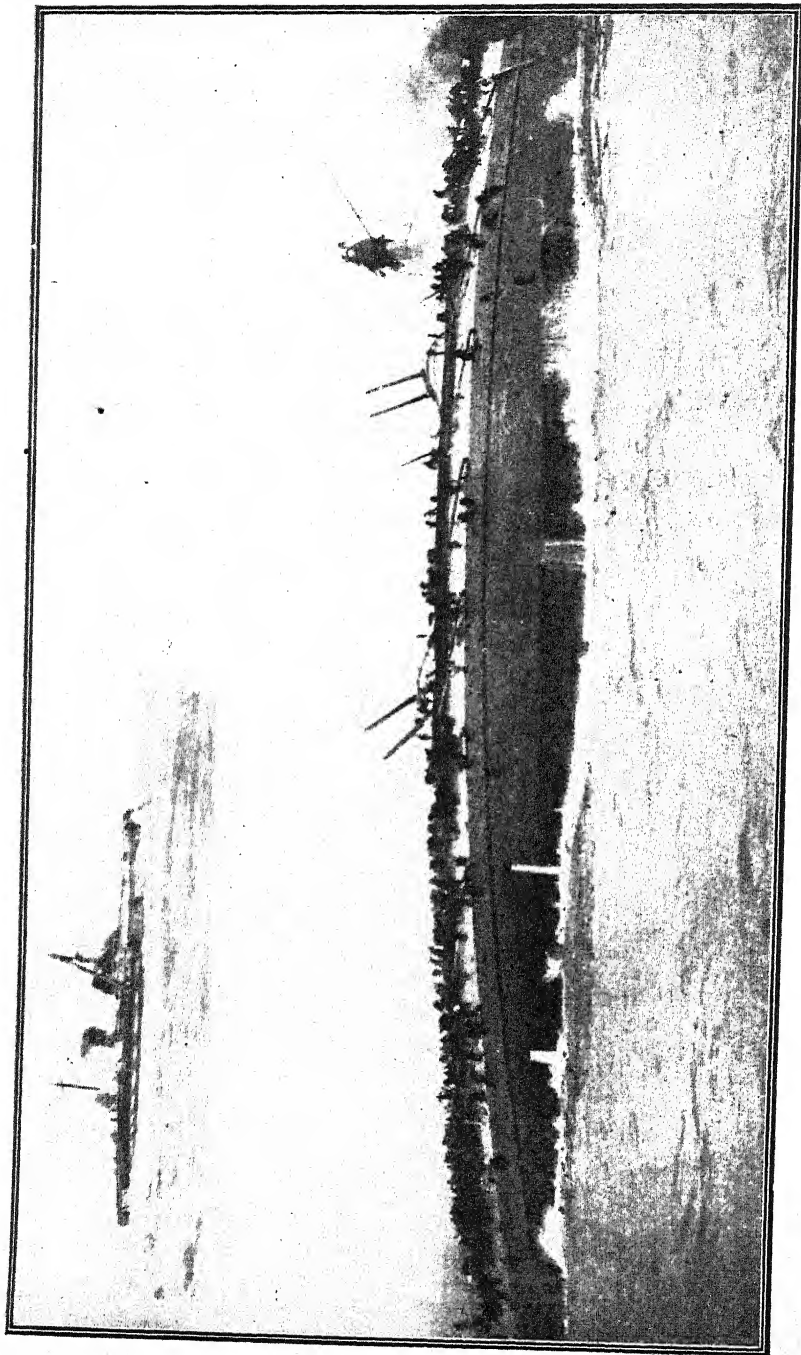


PLATE 30

SINKING OF THE GERMAN ARMoured CRUISER "BLÜCHER" AT THE DOGGER BANK. WITH ABOVE AN EARLIER PHOTOGRAPH OF THAT SHIP BEGINNING TO SINK

This was taken as the men were coming out on the side of the ship. To the right the top of the tripod mast shows dimly through the smoke of a great fire. The *Blücher* had been hit many times and torpedoed at least twice.

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1915]

"BLÜCHER" SUNK

battle was broken off about eighty miles west of Heligoland and sixty miles west of the German minefields.

With no inconsiderable difficulty and danger the *Lion* was taken into the Forth. In the return to port the *Britannia* of the 3rd British Battle Squadron ran aground and sustained considerable damage. But beyond these two ships, both temporarily disabled, and the destroyer *Meteor*, hit in her boilers, there was no serious damage to the British forces.

The figures for the battle are:

BLÜCHER sunk after about three hours' firing.

					Heavy Guns.		
* BRITISH.	Tons.	Hits on.	Killed.	Wounded.	Unwounded Broad- Prisoners.	side. Rounds.	Fired.
<i>Lion</i> ...	26,350	12 ²	0	17	—	10,000	243
<i>Tiger</i> ...	28,500	2 ²	10	11	—	11,200	255
<i>Princess Royal</i>	26,350	0	0	0	—	10,000	271
<i>New Zealand</i>	18,800	0	0	0	—	6,800	139
<i>Indomitable</i>	17,250	0	0	0	—	6,800	50?
Total	117,250	14 ¹	10	28	—	44,800	958
GERMAN.							
SEYDLITZ ...	24,600	2 ²	159	33	—	6,600	390
MOLTKE ...	22,600	0	0	0	—	6,600	276
DERFFLINGER	26,000	1	0	0	—	6,880	310
BLÜCHER ...	15,500	70-100,	792	45	189	2,200	300?
Total	88,700	73?	951	78	189	22,280	1,276

For the complete results, to these should be added the loss of 4 killed and 1 wounded in the British *Meteor*, and 3 killed and 2 wounded in the German KOLBERG.

The ships put out of action on either side were those nearest the antagonist—the *Lion* first in the British line and the BLÜCHER last in the German line. The BLÜCHER, the only ship sunk, was a vessel of inferior class, not fitted to engage battle cruisers. The odds against the Germans, though considerable, were not so great as they looked on paper, because the last two British battle cruisers dropped some distance behind in the chase, and the *Indomitable* was not able to fire with much effect till the BLÜCHER fell astern. Again, the *Tiger*, one of the three battle cruisers which were able to keep up, was a new ship and her crew had not as yet acquired the skill and experience needed for accurate shooting at extreme ranges. Officers present in the battle have stated that she made no hits.

¹ The figures are given differently by different authorities. Those in the text are based on information personally obtained from officers in the battle, for hits by heavy guns.

² *Nordsee*, iii, p. 236, states in text that SEYDLITZ was only hit twice, but in Map 18 in the same work a third hit is shown at 11.25 (10.25 English time).

In the matter of calibres, the lighter and more numerous German guns fired faster and held their own surprisingly well, and the German ships had the advantage of much thicker armour. The British hits down to the period when the BLÜCHER was disabled were only six, and probably not over one per cent. of the rounds fired. The German hits made by Hipper's battle cruisers were at least fourteen, giving a percentage for these ships of 1.5. The Germans contend that the gunnery conditions were unfavourable to them, but on a careful examination of the facts this does not seem to have been the case.

The loss of the BLÜCHER was a severe blow and discouraged activity on the part of the High Sea Fleet at a critical moment when U boat warfare was straining to the utmost the British resources in destroyers. Ingenohl was removed and replaced by Admiral H. von Pohl. Hipper, whose management of this battle did not shine, though he afterwards proved himself a capable officer, remained in command of the German battle cruisers. On the British side Beatty's leadership was resolute and skilful, and it was unfortunate that at the critical moment, through the damage to the *Lion*, the command should have passed to an officer who was new to the Battle Cruiser Force, and that owing to failures in the signal department this officer did not correctly receive Beatty's instructions. It was supposed at the time that mines and submarines had played an important part in enabling Hipper to escape. Such was not actually the case. Neither of these arms was employed on either side. Two torpedoes only were fired by the Germans in the battle, both from the destroyer V 5, and both missed. The British light craft used torpedoes against the BLÜCHER. Fisher regarded the battle with dissatisfaction. His view was that the British battle cruisers should have "sunk the lot," as they might have done if their gunnery at extreme ranges had been better. His aim was always Nelson's: "Not victory but annihilation"—though against an adversary of good quality annihilation is extremely difficult to accomplish. Only in three modern battles—the Nile, Trafalgar and Tsushima—has it been achieved.

After the battle the Germans improved their range finders so as to secure better results at great distances. They made the most careful study of the SEYDLITZ's turrets and magazines and in all their heavy ships carried out changes to prevent a repetition of the disaster which had so nearly destroyed her. They effected great improvements, but none the less

at Jutland ammunition fires of the same dangerous kind were repeated. Attention was drawn to the defective magazine arrangements and weak turret roofs in the British ships, as the result of the *Lion's* disagreeable experiences,¹ but nothing was done. Owing to the stringent censorship maintained in both countries there was some doubt as to the actual result. The Germans imagined that they had sunk either the *Lion* or the *Tiger*; the British believed that the *DERFFLINGER* had crawled back in a shattered condition, whereas her injuries were in no sense serious. They also believed that the *MOLTKE* had sustained heavy loss, though in reality she had not been touched. The British were undoubtedly led by the battle to overestimate the effect of their fire and of their large-calibre projectiles, as to which the battle of the Falklands ought to have inspired doubts.

Whether it was by accident or by design, the disappearance of Ingenohl from the command of the High Sea Fleet was followed by increasing mercilessness in the employment of their U boats by the Germans. On February 1, 1915, Schwieger, who was shortly to win such notoriety from his torpedoing of the *Lusitania*, in U 20 fired a torpedo at the British hospital ship *Asturias*. Fortunately it missed; the German Government admitted a mistake had been made and stated that the *Asturias* in the twilight was not carrying the proper lights, but the evidence of her officers was that the evening was unusually bright and clear and that the character of the vessel could not possibly be mistaken.

In the Irish Sea, U boats began to appear; U 21 (Hersing) was particularly busy near Liverpool, and on January 31 a British instruction was given to Allied merchantmen to hoist neutral flags and conceal all indications that might betray nationality. By the custom of the sea, a merchantman has the right to use a neutral flag to avoid capture.² On January 29, U 21 suddenly appeared off Barrow. She was seen from a battery there which mounted two 6-inch guns, but was taken for a British vessel till she opened fire. The battery replied so effectively that she submerged and went off. The presence of these submarines on or near vital lines of communication necessitated the detachment of destroyers from the North Sea and weakened most dangerously the

¹ Cf. the evasive official statement in Hansard, *House of Commons Debates*, 1921, cxli, column 1,113. Also F. Young's criticism in *Battle Cruisers*, p. 222, which evoked that statement.

² Hall, *Law of Naval Warfare*, p. 84.

Grand Fleet. It thus had an immediate effect on the main naval campaign.

Meantime in Germany Pohl, on taking over command of the High Sea Fleet, had secured William II's impulsive consent to a new system of submarine operations. On February 4, 1915, he published a notice declaring "the waters round Great Britain and Ireland a military area," and threatening with destruction every merchant ship "found in those waters without regard for the safety of those on board," after February 18. Neutrals were told that, in view of the British "misuse of neutral flags," neutral ships would be liable to attack, but the route round the north of the Shetlands and a strip of sea thirty miles wide along the Dutch coast were exempted. The United States Government promptly protested against such action as "an indefensible violation of neutral rights," and, to keep the balance even, at the same time complained to the British Government of the use of the United States flag by British merchantmen, though all the precedents of war were here on the side of Britain. Tirpitz was greatly annoyed at Pohl's "flourish of trumpets"; the wiser leaders in Germany saw that a brutal submarine war would stir the moral indignation of neutrals and sooner or later bring the United States into the conflict, but they were powerless against the rabid advocates of extreme violence.

At this date there were only twenty-seven¹ U boats ready, and of these on an average not more than eight were at sea at any given moment. Seven boats had been lost—U 5, U 7, U 11, U 13, U 15, U 18 and U 31—three of them from accidents and not at the hands of the British. The British loss in this period had been similar (*AE* 1, *C* 31, *D* 2, *D* 5, *E* 3, *E* 10). In the first week of the blockade seven vessels (two of them neutrals) were destroyed, and six others chased or damaged. The British reply to the submarine war was to increase the number of trawlers and drifters engaged in anti-submarine work, and to detach destroyers for that work when they could be spared. As yet the Allies had no effective weapon such as depth charges afterwards became, and had to rely mainly on the mine (the British mines were still bad), nets which entangled the submarine's propellers, the aircraft bomb, or the ram. On March 4, U 8 was destroyed by the ram after being hunted by destroyers; on March 25 the U 29 (Weddigen) was sunk with all hands,

¹ Michelsen gives twenty-seven boats in February, 1915, p. 183.

having been rammed by the *Dreadnought* in an attack on the Grand Fleet. Her captain was an officer who was regarded by the British Navy as an honourable adversary; he had never stooped to the brutality of which many of the German submarine service were guilty.

This war of submarines was a struggle devoid of large tactical interest, but it made extraordinary demand on human courage and endurance, and its importance steadily grew. The following figures show the monthly sinking of merchant shipping, Allied and neutral, as the result of naval action by the Germans and Austrians, in thousands of net register tons. (They include ships sunk by German cruisers and commerce destroyers).¹

	British.	Total for World.		British.	Total for World.
1914 Aug.	40.2	62.7	1915 June	83.1	131.4
Sept.	88.2	98.3	July	52.8	109.6
Oct.	77.8	87.9	Aug.	148.4	185.8
Nov.	8.8	19.4	Sept.	101.6	151.8
Dec.	26.0	44.1	Oct.	54.1	88.5
1915 Jan.	32.0	47.9	Nov.	94.4	153.0
Feb.	36.3	59.9	Dec.	74.4	123.1
Mar.	71.4	80.7	1916 Jan.	62.2	81.2
April	22.4	55.7	Feb.	75.8	117.5
May	84.0	120.0	Mar.	99.0	167.0
			April	141.1	191.6

Two deeds perpetrated by the German submarine commanders stand out from this record of destruction. The first was the sinking of the *Falaba* by U 28 (Forstner). The *Falaba* was a passenger steamer on her way out to the west coast of Africa, with no armament and carrying several women and children. On March 28, 1915, she was sighted by U 28, chased, and, while her boats were in the act of being lowered, torpedoed. As drowning men and women struggled in the water, the crew of the submarine appeared on the superstructure of their boat and jeered at their dying victims.² Among the 104 non-combatants who perished as the result of Forstner's action was a United States citizen.

The second deed was the torpedoing of the unarmed Cunard liner *Lusitania* (with her sister *Mauretania* the fastest vessel on the Atlantic service, having a gross tonnage of

¹ Fayle, iii, p. 465. For continuation of the table see p. 221.

² Forstner's own account of this episode is not correct. (*Als U-Boots Kommandant*, p. 167).

31,550.) Before she sailed from New York the German Embassy published a notice warning United States citizens not to sail in her. She had on board 1,959 persons of whom 440 were women and children and 702 were officers and crew; among her cargo were 4,200 cases of safety ammunition for rifles, 18 cases of fuses, and 125 empty shrapnel cases. On May 7, 1915, while steaming at 18 knots without zig-zagging off the Old Head of Kinsale at 2.15 p.m., she was torpedoed by U 20 (Schwieger). The British evidence is definite that she was twice torpedoed; the Germans insist that only one torpedo was fired, as Schwieger¹ saw there were many passengers. An assertion of this kind is not of any great evidential value, but some of the passengers thought that the boilers exploded, thus causing the second explosion, and they may have been right.

The ship sank rapidly, and only 761 lives were saved. Among the dead were 115 United States citizens. A court of inquiry exempted the commander, Captain W. T. Turner, from all blame, and denied the German allegation that an explosion of the small quantity of ammunition on board caused her rapid sinking.² No act perpetrated in the war by the Germans so moved the world with horror and indignation. The well known Dutch newspaper, *Handelsblad*, expressed the sentiment of a seafaring people when it declared that a nation of genuine seamen would not make war on defenceless people. Roosevelt, who was no milk-and-water sentimentalist, declared the deed was "not merely piracy, but piracy on a vaster scale of murder than any old-time pirate ever practised." On May 14 the United States Government in a note complaining of the sinking of the *Lusitania* and *Falaba*, of the torpedoing of the United States steamer *Gulflight*, in which two Americans were killed, and of an air attack on the United States steamer *Cushing* made on April 28, called on Germany to "take immediate steps to prevent the recurrence of anything so obviously subversive to the principles of warfare." After an acrimonious correspondence, on September 1 the German Government gave a hesitating promise not to sink liners without warning. On August 19 the liner *Arabic* had been sunk in the St. George's Channel by U 24 without warning and several Americans in her had been drowned; and on September 4

¹ Schwieger perished later, in September, 1917, in U 88, mined by the British in the North Sea.

² On the legal issues, see Garner, i, p. 256 ff.

the liner *Hesperian* was torpedoed off the Irish coast and sunk without warning, among the dead being an American. This incident showed that little importance could be attached to German promises, though in actual fact orders were issued by the German Admiralty to exercise caution in sinking passenger ships.

The British Government replied to the U boat blockade by announcing that the lawless methods of the German submarines had compelled the Allies to take retaliatory measures, and prevent commodities of all kinds from reaching or leaving Germany indirectly through neutral ports as well as directly. A definite blockade was not proclaimed because of the risk of "juridical niceties" interfering, in Mr. Asquith's words on March 1, 1915, in the House of Commons. A British order in council was issued on March 11 giving effect to these measures and based expressly on the right of retaliation.¹ The blockade imposed did not offend "against humanity or honesty"; in view of the fact that on January 25, 1915, the German Government had taken control of all foodstuffs in Germany, no food cargoes could be intended for the civil population of Germany. As far back as September, 1914, as has already been noticed, the KARLSRUHE had destroyed a cargo of wheat in the neutral steamer *Maria* for civilian use in the British Isles—the first act of interference with food supply in the war.

Among the devices introduced by the British to fight submarines were various kinds of decoy vessels and submarine traps. Armed trawlers were fitted to tow old British submarines; the trawler acted as a lure and when the U boat approached to destroy her the British submarine intervened and torpedoed the German. In this way on June 23, 1915, the trawler *Taranaki* with *C* 24 destroyed the large new submarine *U* 40 with all on board except three officers. Q-ships, as they were called, were prepared resembling ordinary merchant steamers, but equipped with a powerful concealed armament which could at a moment be brought into play.

One of the most famous was the *Baralong* (Lieut.-Commander G. Herbert). On the same day that the *Arabic* had been sunk with serious loss of life, August 19, 1915, *U* 27 (Wegener) attacked the steamer *Nicosian* with mules on board for the British army. A second submarine was in

¹ *Times Documentary History of the War*, xi, p. 154. Cf. Garner, ii, p. 323, on the legal issues.

U 27's company at the time when the capture was made. The *Baralong* arrived on the scene under United States colours as U 27 was firing into the *Nicosian*, to sink that ship. The *Baralong* got close to U 27 and then hoisted the white ensign and opened fire on her with deadly effect, sinking her at once with the bulk of her crew. A dozen Germans, however, climbed on board the *Nicosian*, and Commander Herbert ordered the British party to follow them on board and shoot them, to prevent them from destroying the vessel with a cargo of such military importance. Eight Germans were killed in the water and four more were found in the engine room and shot in hot blood.

On the strength of statements made by American muleteers the British were afterwards accused of inhuman action in this regrettable affair; but while their action will not be defended, any fair-minded judge will recognise that it was provoked by similar or much worse deeds on the part of the U boat crews. The British Government offered to have the whole affair investigated by an international tribunal, provided that three cases in which British counter-charges were brought against the German Navy, were investigated at the same time. All three occurred in the forty-eight hours period in which the *Baralong* affair fell. Two of the three were the sinking of the *Arabic* and the firing on the helpless crew of *E 13* (see p. 242). The German Government refused the proposal and threatened reprisals.

In March, 1915, the first of the German mine-laying submarines entered service—UB 11, laid down in November, 1914, a small vessel of 147 tons surface displacement, carrying eight mines. Fifteen larger mine-layers of 168 tons (the first of the UC class) were ready in the spring and summer of 1915. This was a new and insidious weapon which caused heavy loss. The British Navy was far behind the German in adopting it, as not until June 22, 1916, were the first British mines laid from the submarine mine-layer *E 41* in the Bight of Heligoland.

In their attacks on British warships in the North Sea in the first half of 1915 the German submarines had little success. In June, the 3rd Cruiser Squadron on a sweep to the Skager Rack was attacked by four U boats off the Forth, but sustained no damage. On the 20th, however, the armoured cruiser *Roxburgh* was struck by a torpedo off the Forth, fired from U 38, and had to be docked for extensive repairs though she was able to proceed into Rosyth under her

own steam at 14 knots. She was moving at high speed, zig-zagging, and screened by one destroyer when the attack was made, so that the best precautions could not always safeguard British cruisers.

The capture of the German colonies at the earliest possible date was strategically important to prevent them from serving as bases for German cruisers in the war against commerce. Operations against them were begun at the opening of the struggle, but the history of these belongs to the records of land war, though the Navy throughout co-operated and supplied the very large tonnage of transport required. It also provided craft to operate on the rivers. Togoland was reduced by British and French forces on August 26, 1914, whereas the Cameroons held out till February 18, 1916. German South West Africa was occupied by Botha after a brilliant campaign with South African forces which ended on July 9, 1915. German East Africa was not cleared till September, 1918, and the campaign there began with a serious British reverse at Tanga in November, 1914. The coast line was blockaded from February, 1915, onwards, though three vessels¹ got through with arms and munitions for the German troops on land.

On the far-off waters of the great African lakes there was fighting. On Lake Nyassa the British armed steamer *Gwendolen* on August 13, 1914, destroyed a German armed vessel which was on the stocks at Sphinxhaven. On Tanganyika, the Germans were long supreme with three steamers, the largest of 500 tons, *GRAF VON GOTZEN*, armed with one 4.1-inch and two smaller guns. Finally, Lieut.-Commander G. B. Spicer-Simson of the British Navy achieved the extraordinary feat of hauling by motor tractors and moving by rail over difficult, tropical, mountainous country two motor launches from Capetown to Elizabethville in the Congo Free State, and thence by the river Lualaba and the railway to Albertville, the Belgian port on Tanganyika.² The journey occupied five months but it was crowned with complete success; the motor launches (armed with one 3-pounder and one machine gun each) were placed on Tanganyika; and in February, 1916, after all these efforts they made a speedy end of the German flotilla capturing two of its vessels, while the third, which remained in port at

¹ ADJUTANT, RUBENS, and MARIA

² See E. K. Chatterton, *The Auxiliary Patrol*, p. 132 ff.

Kigoma, was attacked by aeroplane and finally scuttled by the Germans. On the most important of the lakes, Victoria Nyanza, as Lettow-Vorbeck¹ states, the mastery was in British hands owing to the British superiority in the number of ships, though against this was to be set the fact that guns were lacking. The small German armed tug MUANSA was able to cause a good deal of trouble before she was disabled, in March, 1915.

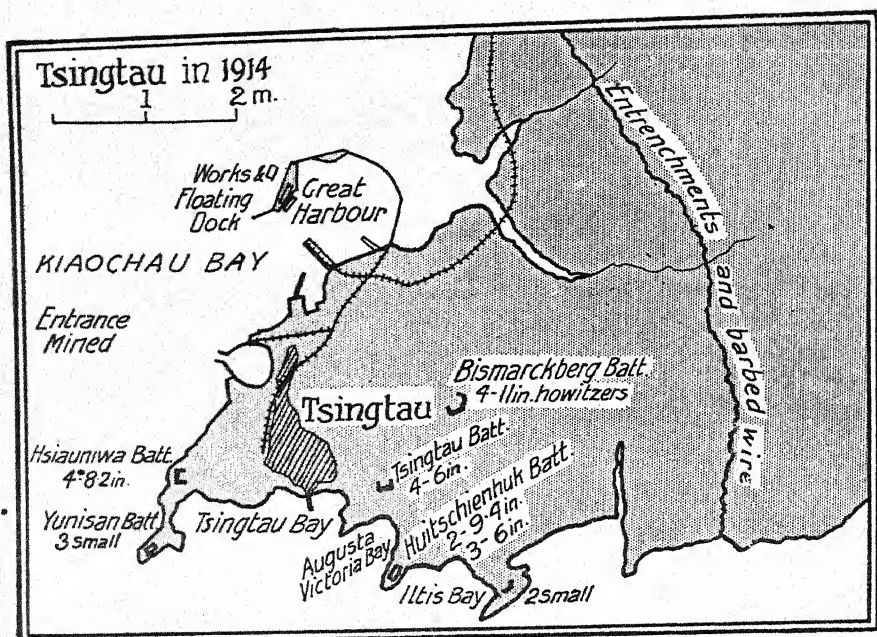
In the Pacific, as has already been noted, a New Zealand expedition escorted by the *Australia* and other warships took possession of the German base at Apia in the Samoa islands, on August 30, 1914; and in September an Australian expedition seized the German bases in New Guinea, New Britain and the Solomon Islands; while about the same time the Japanese cleared Yap, the Carolines, and the Marshall Islands.

Of the German bases oversea, the most important was Tsingtau on the Bay of Kiaochau, in China. It had been carefully fortified (its works mounting 11-inch howitzers and 9.4-inch and 8.2-inch guns of older pattern),² to protect it against a sudden stroke not to resist a siege in force by a great Power. On August 15, 1914, the Japanese Government sent Germany an ultimatum requiring the surrender of the place by September 16, failing which Japan would take action on August 23. The German Government rejected the ultimatum and ordered Captain Meyer-Waldeck of the German Navy, the Governor of Tsingtau, to resist to the last. He had in the port the old gunboats JAGUAR, ILTIS, TIGER and LUCHS, the antiquated Austrian cruiser KAISERIN ELISABETH, and the old destroyer S 90 (396 tons, 24 knots, three 4-pounders). The strength of the garrison was about 4,000, apart from the crews of these ships. The main conduct of the operations was in the hands of the Japanese, but it was agreed that a small British squadron and land force should assist.

The first encounter of the siege took place on August 22, 1914, when the British destroyer *Kennet* attacked and drove back the S 90, but the *Kennet* though carrying a much more powerful armament (three 12-pounders) lost 4 killed and 6 wounded, whereas S 90 had no casualties. The Allied force off Tsingtau at this date consisted of the old battleship

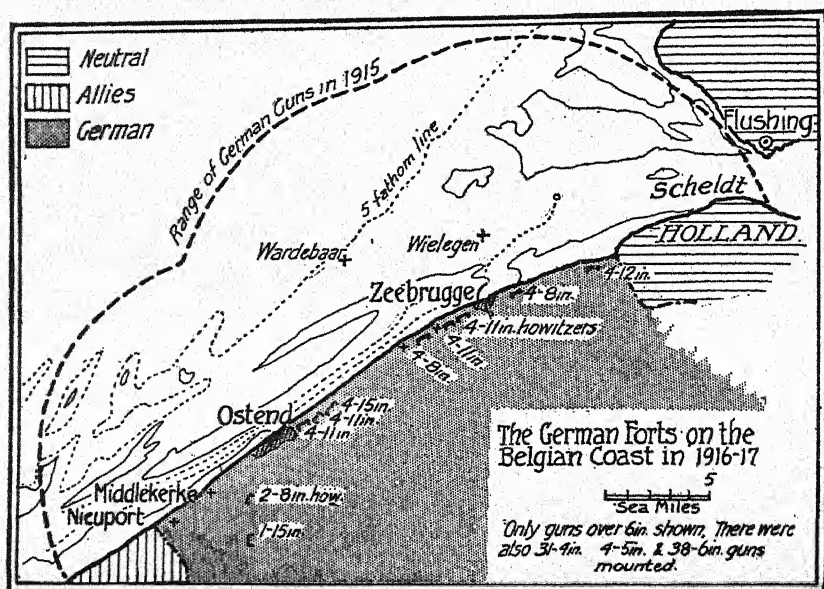
¹ *Ostafrika*, p. 77.

² There were only twenty-four guns of 6-inch calibre and upwards, and but one effective aeroplane, too weak to carry an observer.

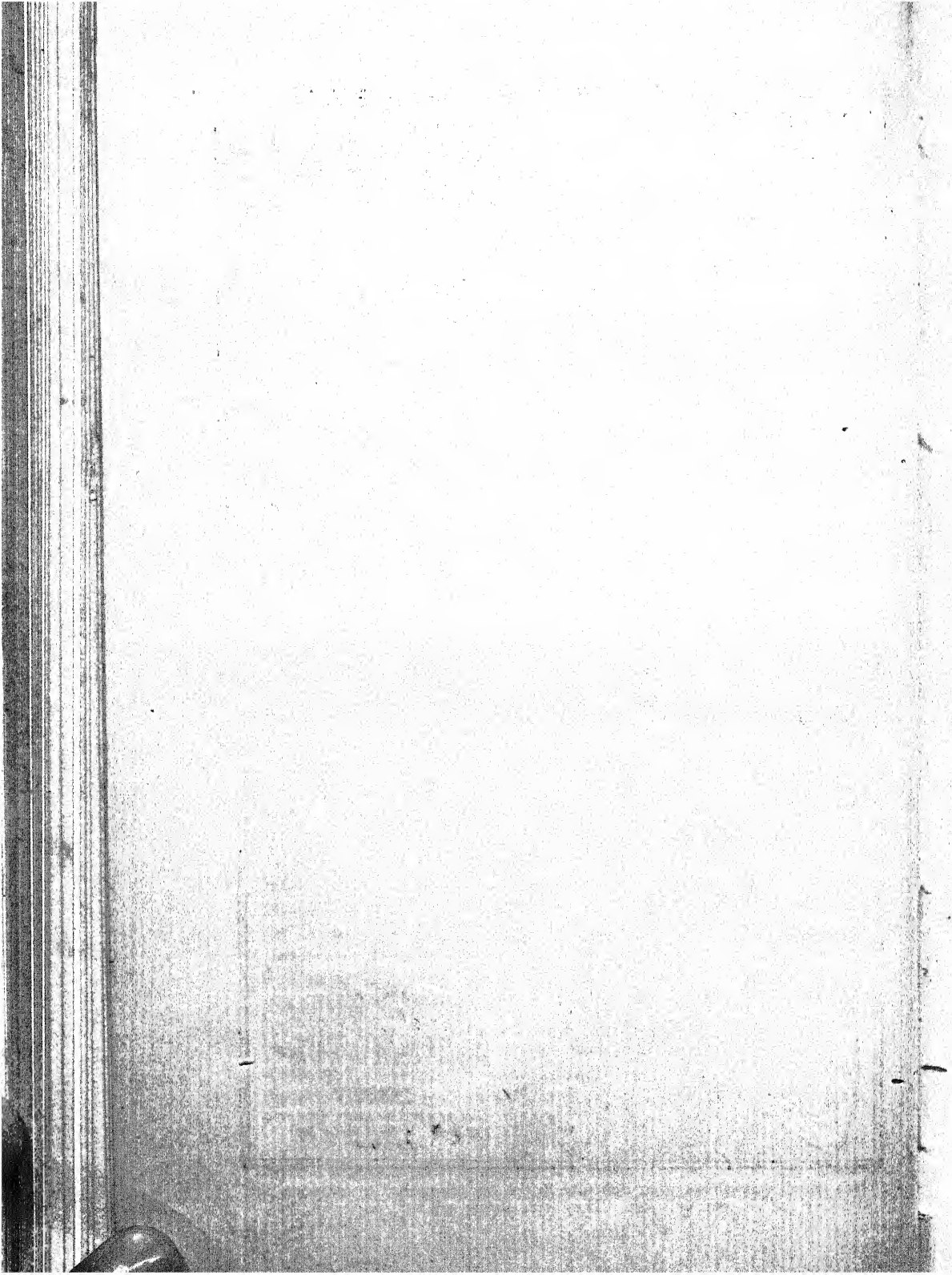


TSINGTAU AND ITS DEFENCES

In the land attack the Japanese carried the entrenched line, while the allied ships swept with their fire the roads by which Tsingtau was linked to the work.



This sketch map shows what difficulty British squadrons had to overcome in attacking the German defences. They were strong and well concealed.



Triumph, light cruiser *Yarmouth*, old French armoured cruiser *Dupleix*, and five destroyers. On August 27 Japan formally proclaimed a blockade, and a powerful naval force under Vice-Admiral Sato took charge of the naval attack. It consisted of the old battleships *Suwo* (ex-*Peresviet*), *Iwami* (ex-*Orel*), *Tango* (ex-*Poltava*), with the *Triumph* attached, and the coast-defence ships *Okinoshima* (ex-*Apraxin*) and *Minoshima* (ex-*Seniavin*), besides the old armoured cruisers *Iwate*, *Tokiwa* and *Yakumo*, the light cruiser *Tone*, three Japanese flotillas of destroyers, and the British destroyer *Usk* attached to the *Triumph*.

As in the Japanese operations in previous wars against Port Arthur and Wei-hai-wei, the main attack on Tsingtau was delivered by land, the naval forces merely observing and bombarding the place. The first Japanese landing took place at Lungkau, 150 miles north of Tsingtau, to clear the country before the seizure of bases nearer to the fortress, in Laoshan and Kinkiakou Bays, where the main strength of the Japanese siege force and the small British expedition (under Brig.-General N. W. Barnardiston) landed in September.

Japan on September 4 lost the 380-ton destroyer *Shirataye*, which ran on the rocks at Tsingtau and could not be got off. The Japanese destroyers and larger ships on September 17 and 18 shelled a small German work overlooking Laoshan Bay with such effect that it was prevented from interfering with the landing. The German warships in Kiaochau Bay caused some trouble to the Japanese army in its advance against the land front of the fortress until Japanese aircraft were brought into play engaging the attention of the German vessels. On September 28 the Japanese land artillery opened a general bombardment of the German land front, and at 8.45 a.m. that day the battleships *Suwo*, *Iwami*, *Tango* and *Triumph* joined in, steaming to and fro along a line which had been cleared of mines and buoyed. Their shells did not cause any serious damage to the German works, but the moral effect was considerable, and they rendered movement along the roads leading out of the fortress to the land front impracticable.

On the following days the naval bombardment continued at extreme range (outside 15,000 yards which was the utmost the German guns were supposed able to reach). Alterations were made in the German gun mountings to meet these tactics, with the result that on October 14 a heavy German shell hit the *Triumph*, killing 1 man and wounding 2. The

Allies, however, slightly increased the range when the German guns again were left impotent. Meantime most of the German warships in Kiaochau Bay were sunk to prevent their capture, and the S 90 made her escape on a dark night, October 17-18. Encountering the ancient Japanese cruiser *Takachiho* on her way, she fired three torpedoes into that vessel and sank it. Of the Japanese crew of 270 only 3 were saved; and they had seen nothing of the destroyer but imagined their ship had struck a mine. The S 90 ran ashore as it was out of the question to get away, and was wrecked by her crew in Chinese territory.

In November a heavy bombardment of the fortress by sea and land guns opened and on the 6th the electric light and wireless stations were destroyed, probably by the long-range shells of the Japanese armoured ships. On the morning of November 7, when the Japanese troops had stormed the principal land works, the white flag was shown and Meyer-Waldeck surrendered after a gallant defence. Everything of any value to the Allies had been destroyed. The Japanese Staff's report places the garrison at 4,689 officers and men, the Japanese land force engaged at 63,000 officers and men, and the siege artillery employed at 160 heavy guns, including 11-, 10-, and 8-inch howitzers, of which the 11-inch howitzers fired 798 projectiles. The forts on the sea front remained formidable to the last, and their fire was never really extinguished by the ships.¹

In the earlier days of the Mesopotamian campaign the British Navy played a not inconsiderable part.² The sloops *Odin* and *Espiegle* (each six 4-inch guns, draught 11½ feet) with the Indian Marine armed steamer *Lawrence* and three small armed craft were capable of ascending the Shatt-el-Arab, as the lower reaches of the Tigris are named. The landing of the Indian troops was accomplished at Fao under fire of the guns of the *Odin* and the boats of the old battleship *Ocean*, on November 6, 1914, while the *Espiegle* shelled the Turks near Mohammerah. The sloops were not able to ascend the Tigris above Ezra's Tomb. The smaller craft, however, took part in the advance to Kut (which was captured on September 28, 1915) and Ctesiphon, where the British suffered a check on November 22, 1915, and were forced to retreat. In the retirement the river gunboat *Firefly* (98

¹ See Vollerthun, p. 142.

² It was supposed that the *EMDEN* meant to make for Basra. Moberly, *Official History of the War: Mesopotamia*, i, p. 97.

tons) and the small gunboats *Comet* and *Shaitan* were lost, with one tug, one launch and three lighters, after rendering the most gallant assistance. When Townshend was besieged in Kut, the paddle steamer *Julnar*, manned by ratings from the British Navy, was captured on April 24, 1916, after both the officers on board had been killed in a heroic attempt to run supplies through to the garrison.

When after long delay offensive operations were once more undertaken by Maude with a strong force, the British Navy was in greater strength, with eight new gun boats, designed for shallow water, three of them mounting two 6-inch,¹ two 12-pounders, and six machine guns apiece on a draught of only 4 feet. These vessels were really more powerful than the much larger sloops which had been taken into the lower reaches of the Tigris early in the war. The smaller type of gunboat carried one 4-inch gun and three other small weapons. These formidable vessels played an important part in turning the Turkish defences above Kut on February 26, 1917, and themselves suffered considerably. They took three ships, ten barges and thirty lighters and pontoons, and on March 10 assisted in the crossing of the Tigris, preliminary to the fall of Baghdad which the British occupied on March 11, 1917.

It had been supposed before the war that Germany would send numerous fast cruisers and armed merchant ships to sea to prey upon Allied commerce, which offered her so large a target. But her surface operations against trade after the opening period were feebly conceived probably because so much attention was concentrated upon submarine warfare. There was nothing, however, to prevent fast ships from stealing out and evading the British watch in the North Sea in stormy weather. Among the marauders which did get to sea was the *METEOR*, a British steamer seized at Hamburg on the outbreak of war, which was fitted out as a mine-layer and used first of all to interfere with the transport of munitions to the Russian ports in the White Sea. Covered by the German Main Fleet, which cautiously steamed towards the Dogger Bank on May 29, 1915, she reached the Norwegian coast and then eluding all British observation proceeded to the White Sea, where on June 7 and 8, 1915 she laid several minefields. Returning, she cruised in the Skager Rack on June 15 and 16 examining Scandinavian steamers, of which she seized four

¹ The first result of war experience was to prove the need of powerful batteries. Compare these vessels with such pre-war river gunboats as the *Bramble* (8 feet draught, two 4-inch and four 12-pounders.)

and sank three. The mines in the White Sea caused much inconvenience and loss to the Allies.

The METEOR received various improvements and again put to sea on August 6, her mission on this occasion being not to operate against merchantmen and munition traffic, but to lay 374 mines in the Moray Firth and thus to mine in various sections of the Grand Fleet at Cromarty. She was to be supported by U 17. The usual wireless activity on the part of the Germans when they were showing any liveliness, had, however, attracted the attention of the British Staff and the British were on the alert. She was sighted off Cromarty Firth early on August 8 by the British armed boarding steamer *Ramsey*, attached to the Grand Fleet for the purpose of examining suspicious ships. The *Ramsey* lowered a boat to examine the stranger, when at a distance of 1,000 yards the METEOR hauled down the Russian flag which she had been flying, and showed the German flag, simultaneously discharging a torpedo at the *Ramsey* and opening fire on her with her 4.1-inch guns. The *Ramsey* carried only two 12-pounders; she was hit by the torpedo and at once began to sink. The commander of the METEOR (von Knorr) acted with humanity and picked up 43 of the 97 officers and men on board.

With them the METEOR made her way towards the Bay of Heligoland, destroying on the way a neutral vessel laden with pit props. The 1st, 2nd and 4th Light Cruiser Squadrons were, however, out in search for her, followed by Tyrwhitt with five of the Harwich light cruisers. Though the German command sent out a seaplane and a Zeppelin, L 7, to aid her and ordered two submarines to go to her support, she was cut off and Knorr sank her to avoid capture. He behaved with great courtesy to his British prisoners, lending the senior officer surviving from the *Ramsey* £7 in English notes, which was afterwards returned with a message of thanks. The prisoners with their captors had been taken off by a Swedish vessel, and after some dispute between the British and Germans, the British were transferred to a Norwegian fishing vessel and thus rejoined Tyrwhitt's squadron.

The effect of the METEOR's minefields was not very serious. They were detected at once, and one of them was retained and not swept up, because it relieved the strain on the British patrols and diminished the area that had to be watched. The destroyer *Lynx*, however, was sunk in one

of the new minefields with a loss of some 80 officers and men, and two mine-sweepers were badly damaged. Moreover, the METEOR's operation led to a fear in the Grand Fleet that systematic efforts might be made by the Germans to mine it in; and Jellicoe's desire for a comprehensive Allied mining policy in the North Sea was strengthened.

He wished to lay extensive fields so as to hamper hostile surface ships and submarines—using against the latter deep mines on or near the bottom in suitable stretches of water. This wish of Jellicoe's was shared by Bacon, in command at Dover. Both desired to use mines on the largest scale against the German submarines. The Admiralty at first was opposed to this mining strategy as tending to limit the work of British submarines and to hamper fleet operations if they became necessary. Jellicoe's scheme was thus not carried out, but there was a considerable extension of British mining activity. The British mines, however, at this date were so imperfect and so few in number that they were much less dangerous than might have been expected. But the zone immediately off the German coast, as the result of constant mining and increased activity on the part of the British submarines, did actually become perilous to the U boats.¹ No doubt the lack of tolerable mines, as well as the shortcomings of the British torpedoes (which are a constant theme of the German Official History in this period) were due to the absence of a staff in the British Navy before 1912.

As the war continued, it became a matter of great naval importance to prevent the Germans from using Ostend and Zeebrugge as naval bases and to disturb them there. The Allied military forces were not able to advance against these places owing to the inundations on the Yser, and the British military command was not willing that they should be blocked, by sinking blockships in the entrances to their ports. It hoped to utilise them as bases of supply when the great Allied advance was begun. The only means of interfering with them, therefore, was by long range bombardments; and though Rear-Admiral R. H. Bacon, commanding the naval force at Dover, had no great belief in such operations, he did his best to carry them out with success.

He had a large number of miscellaneous vessels, including numerous drifters manned by fishermen, but most of his warships were old or only fit for very limited coast service. Among them in August, 1915, were three monitors (*Lord*

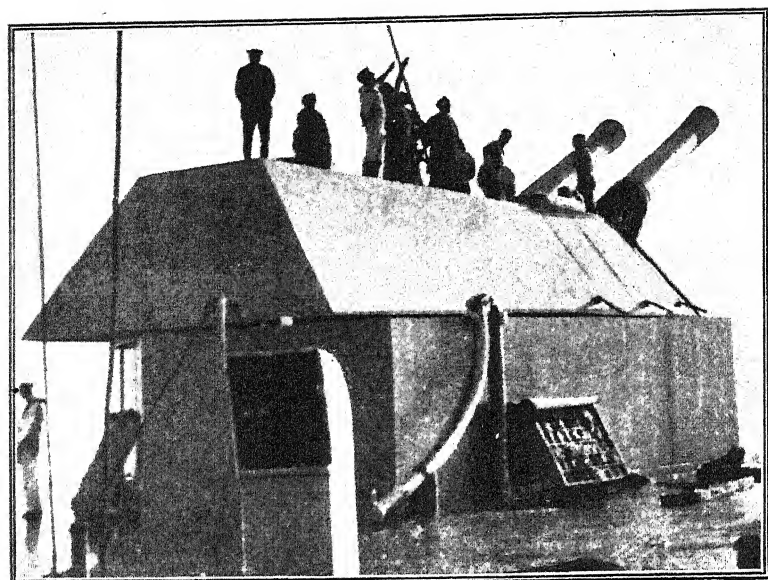
¹ *Nordsee*, iv, p. 299.

Clive, *Sir J. Moore*, and *Prince Rupert*). These were each armed with two old 12-inch guns in turrets taken from the ancient battleships of the *Majestic* class. They were fitted with "bulges" and drew little water, but had such feeble engines and were generally so unwieldy and vulnerable as to be of little value. A serious mistake had been made in building such vessels, which could neither steer nor steam.

Bacon displayed much ingenuity in training and equipping his motley force for long-range firing. Among the devices which he tried were portable steel platforms, resting on tripods placed on the bottom in shallow water, for observers. But though inconspicuous, these platforms early in the operations proved vulnerable to German fire, and aircraft had to replace them for the work of spotting and directing the British shooting. To protect his monitors against submarine attack, Bacon enclosed them in a triangular shelter of nets. Fortunately for him, the German torpedo craft were unenterprising and failed to attack the monitors with any energy. After some initial trials, smoke screens were used to protect the bombarding ships as far as possible from the German batteries.

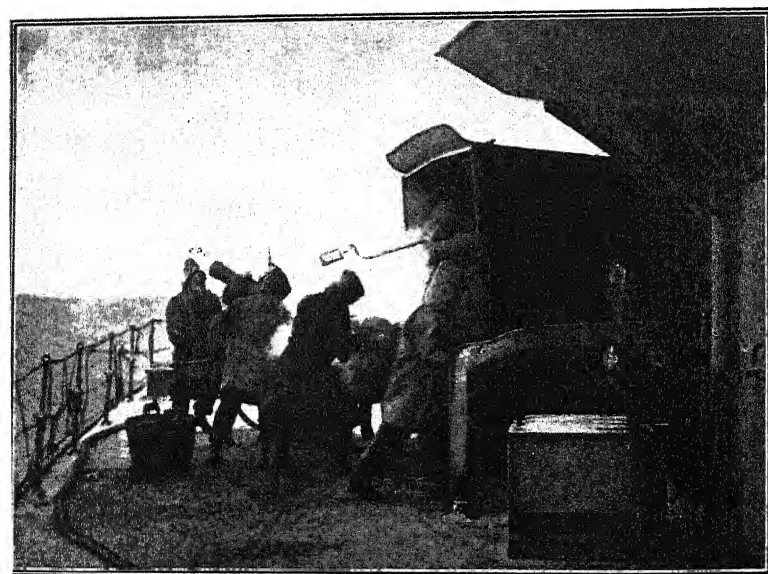
In the night of August 22-23 the small French destroyers *Branlebas* and *Oriflamme*, on patrol duty off the Flanders coast, sighted and attacked a hostile torpedo vessel, the small German torpedo boat A 15. They hit her ten times and sank her with a loss to the Germans of about 20 men. Next morning Bacon's three monitors, convoyed by a large flotilla, bombarded Zeebrugge at long range for two hours. The German batteries replied. On neither side was any serious damage done; but the monitors had numerous breakdowns. On September 7, to comply with the wishes of Joffre, Bacon shelled the harbour at Ostend with his three monitors, reinforced by the additional monitors *General Crauford* (two 12-inch guns) and *M 25* (one 9.2-inch gun) and the old battleship *Redoubtable* (ex-*Revenge*).

The day was clear and the German fire in reply extremely good at 18,000 yards. So effective was it that the monitors were driven off and they were lucky to escape, as it appeared that the German 11-inch guns in the Tirpitz battery could shoot accurately up to 32,000 yards. The net result was again insignificant on either side. Further coast bombardments were carried out by Bacon in the closing days of September, 1915, with the object of occupying the German attention and holding German troops in the west; in one of them the



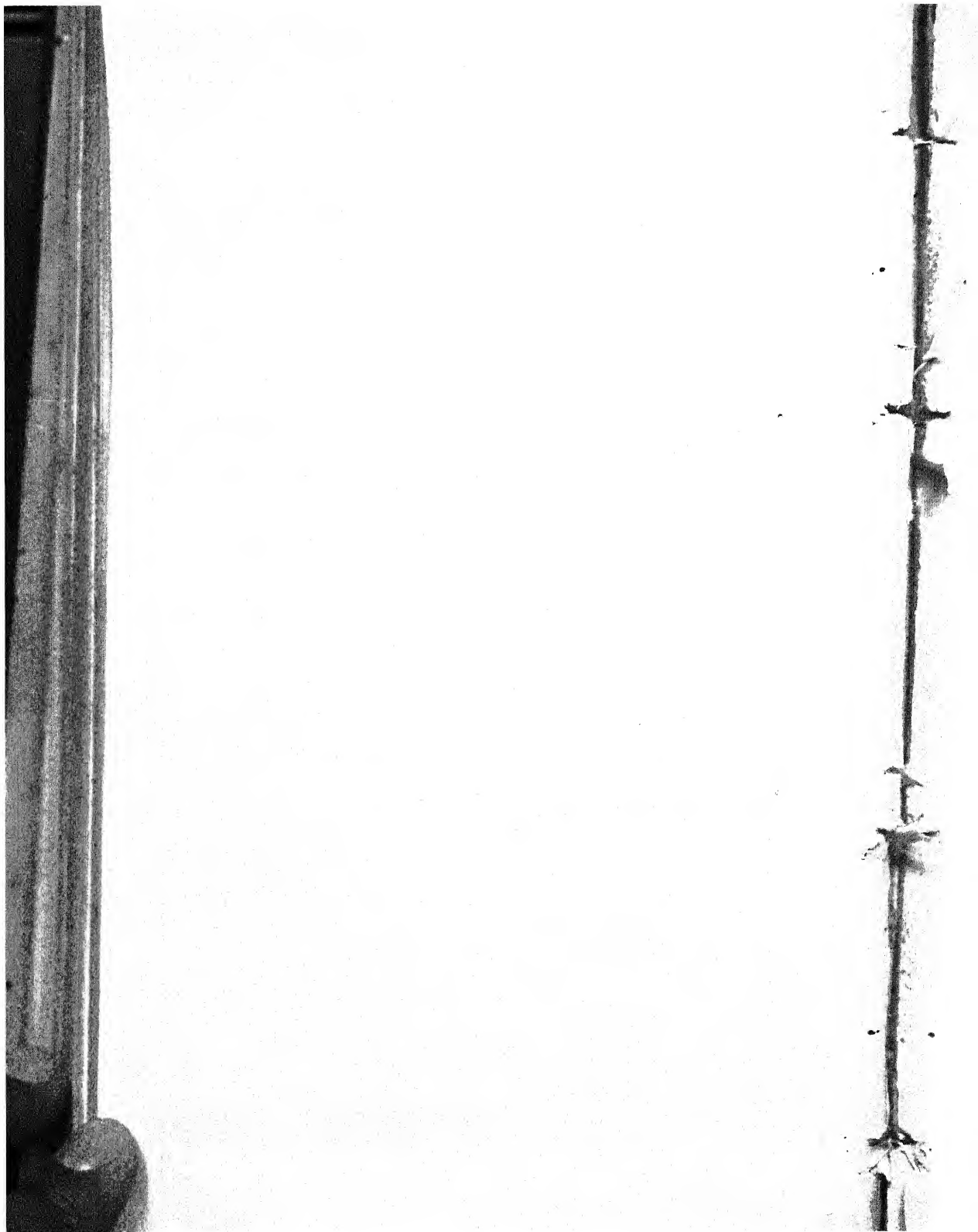
A BRITISH MONITOR IN ACTION, BOMBARDING ON THE BELGIAN COAST.
GERMAN AIRCRAFT ATTACKING

The men on the turret roof are watching the attack quite calmly. The anti-aircraft guns are in action.



A BRITISH GUN CREW IN ACTION IN THE BALTIC (IN 1919). WINTER
DRESS

This shows the dress worn in severe weather throughout the Navy, in northern waters.



British auxiliary yacht *Sanda* was hit and sunk, all her executive officers being killed, including Lieut.-Commander Gartside-Tipping, the oldest naval officer serving at sea, who was over 70. In December the German positions at Westende were twice bombarded, and on January 26, 1916, five monitors delivered an attack on these same positions, on which occasion the French Rear-Admiral de Marliave flew his flag in the British monitor *Lord Clive*.

The effect of these bombardments was to confirm the old principle that ships cannot with reasonable hope of success engage well-mounted guns ashore. But the British had to face a special difficulty in the fact that the Germans were in Belgian territory and that as a matter of course Belgian life and property had to be spared. Otherwise Ostend and Zeebrugge could speedily have been reduced to heaps of ruins and have been bombed incessantly from the air. Air attack proved in such conditions to be more dangerous and disquieting to the Germans than naval bombardments.

At the close of 1915 the steamer *Pungo* of 4,500 tons was converted into an auxiliary cruiser by the Germans and rechristened *Möwe*. She was disguised as a Swedish vessel and had the Swedish colours painted on her sides. She stole out to sea on December 29, and a few days later laid a series of mines at the western entrance to Pentland Firth, one of which was struck by the old British battleship *King Edward VII* on January 6, 1916. The weather was exceedingly stormy or the British ship could probably have been saved; as it was, her crew were removed without loss. It was at first supposed that the *King Edward* had been sunk by a submarine.

The *Möwe* then steamed to the Bay of Biscay and laid other minefields off the Loire and Gironde. She next proceeded towards the north coast of South America, capturing and sinking in all thirteen Allied vessels and sending two more into neutral ports with the captured crews. The *Möwe's* commander, Count zu Dohna, behaved with humanity throughout, except in the cruel business of laying mines in open waters to the great danger of neutrals. His career would have closed much earlier had not a grave neglect of duty occurred in the British armoured cruiser *Essex*, whose wireless staff received a call for help from the British steamer *Clan Mactavish* on January 16, when the latter was in action with the *Möwe*. The *Clan Mactavish* was defensively armed, yet she put up a most gallant resistance.

The message when it reached the *Essex* was not given to the captain; otherwise it would have brought several British warships down upon the *Möwe*. After several narrow escapes she regained Wilhelmshaven on March 5. One of her prizes, the *APPAM*, a British ship, with cargo worth £2,000,000 was sent with prisoners on board into the United States port of Hampton Roads, in charge of a German prize crew. The German Government claimed the vessel as a lawful German prize, but in March, 1917, before the United States entered the war, the Washington Supreme Court restored her to her British owners on the sound principle that neutral ports could not be used by belligerents for the disposal of their captures.¹

The cruise of the *Möwe* was followed by the despatch to sea of another German auxiliary cruiser, the *GREIF*, on February 27, though the Germans knew from the British wireless that the British Navy was on the alert and looking out for such a vessel. Among the British ships which were watching the northern exit from the North Sea were the armed liners *Andes* and *Alcantara* and three light cruisers. The *GREIF* was disguised as a Norwegian tramp the *Rena*, which she was painted to resemble. She carried two torpedo tubes and four 6-inch guns.

On February 29 she was sighted by the two British armed liners and was stopped and hove to by the *Alcantara*. The British vessel was lowering a boat to examine her, when the *GREIF* hauled down the Norwegian flag and suddenly opened fire. A fierce engagement began in which the *Andes* joined; the *GREIF* torpedoed the *Alcantara* but herself sustained such damage that she took fire and began to sink. At this point the British light cruisers and a destroyer arrived and saved the survivors of the *Alcantara*, but as *U 70* was believed to be in the neighbourhood and co-operating with the *GREIF*, they had to show extreme caution and it was some time before they could rescue the Germans in the water. Of the German crew 97 were killed or drowned, and 209 were taken prisoners. The British loss was 74 killed or drowned.

At the close of 1915 growing anxiety in the British naval command led to a reconsideration of the British strategy. There was a proposal to return to the plan which Sir Arthur Wilson and Fisher had vaguely entertained before the war, for a close blockade of the German Fleet, and seizure of one of the islands off the East Frisian coast. A careful examina-

¹ Hall, *Law of Naval Warfare*, pp. 168-9. Garner, ii, p. 439.

tion of that plan, however, showed that it was impracticable in existing conditions, owing to the greatly increased range of heavy artillery (which would render the island liable to bombardment from the mainland) and the insufficient number of destroyers available; and the Staff fell back on small-scale air raids against the German naval bases on the North Sea from which there was not much to be expected. On January 18, 1916, an attempt was made to bomb the Zeppelin bases in East Frisia and Schleswig, but fog came down and the only result was the loss of the British submarine *H 6* through stranding. Another such attempt was made on January 29, and was abandoned when the supposed track of two torpedoes was seen in the water near Tyrwhitt's flagship, while he was covering the operation. No German torpedo craft were in his vicinity, but he withdrew, and as he was doing so dense fog came down.

Meanwhile a fresh change took place in the command of the High Sea Fleet. On January 19 Pohl, who had resigned as the result of a grave internal complaint, was replaced by Scheer who was a resolute advocate of offensive tactics. The basis of his plans was avoidance of a decisive battle with the concentrated British Fleet but combination of submarine, airship and mine enterprises with the action of the High Sea Fleet. He contemplated movements into the southern half of the North Sea beside the usual German cruises towards the Dogger Bank and Skager Rack. There were speedily signs of increased activity on the part of the German cruisers and destroyers. On February 1-2, a Zeppelin attack was delivered against the English East Coast, and on its return *L 19* was fired at in Dutch territory and came down in the North Sea.¹ There it was sighted by the British trawler *King Stephen*. The crew of the trawler had no arms and therefore declined to rescue the Germans who would certainly have overpowered them. All in *L 19* perished.

On February 9 the British Staff detected indications from the German wireless that a stroke of some kind was impending, and all the British naval forces were warned except the 10th Sloop Flotilla (*Buttercup*, *Arabis*, *Alyssum*, *Poppy*, 1,250-ton, 15-knot mine-sweepers, armed with two old pattern 4-inch or 4.7-inch guns) which was at sea and could not be called up by wireless without putting the Germans on the alert. The sloops were at work east of the Dogger Bank, sweeping, when in the night of February 10-11 they were attacked by

¹ Garner i. p. 474 deals with the legal issue.

twenty-five powerful German destroyers, and the *Arabis* was sunk with a loss of some 60 officers and men. This was followed by the loss of Tyrwhitt's flagship, the *Arethusa*, which on the following day struck a mine as she was returning to Harwich, and had to be abandoned with a casualty list of 11 killed in her engine room. The mine had been laid by one of the German mine-laying submarines which were always busy in these waters, operating from Zeebrugge and Ostend.

Scheer was bent on the most ruthless submarine war against Allied commerce; and on February 12 the German Government informed the United States that defensively armed Allied merchantmen would be treated as warships, which meant that they would be sunk without notice, from March 1. On February 16, however, it weakened in its attitude, recognised its liability to pay an indemnity for American subjects killed in submarine attacks, and made promises of good behaviour in the future. Bethmann Hollweg, the German Chancellor, warned the German Staff and Navy that war with the United States would be the result if more caution were not shown in submarine operations. The resignation of Tirpitz followed a naval conference held on March 6, 1916.

He was replaced by Capelle who was a less extreme advocate of violence, but orders were none the less issued to German submarine officers to sink everything British found in the war area, except passenger steamers. The tonnage of ships sunk by submarines rose enormously in March and April. One consequence of this new order was the torpedoing of the French passenger steamer *Sussex* on March 24, by UB 29, near Boulogne. At least 12 persons were killed and several United States citizens on board received injuries, though the vessel did not sink. The German Government informed the United States that the *Sussex* had been damaged by a mine. This statement was speedily shown to be false, as portions of the torpedo were recovered and proved to be German. The United States Government therefore threatened to break off relations unless the German Government made "effective renunciation of its present methods of submarine warfare against passenger and cargo ships:" and after some hesitation the German Government yielded on April 24, and agreed not to sink ships at sight, when the tonnage of merchantmen sunk was immediately halved. This decision liberated a number of U boats for work with the fleet.

One of Scheer's first acts was to take his whole fleet (twenty Dreadnoughts and battle cruisers strong) in the night of March 5, 1916, far out into the North Sea. In co-operation with the fleet a number of airships raided England, and the Flanders submarines watched the exits from the southern British bases. The German battle cruisers pushed as far south as the latitude of Ymuiden, only seventy miles north of Zeebrugge, before they turned on March 6. Scheer maintained an unusually strict wireless discipline, so that the British were not aware of this most dangerous movement till the Germans were off Terschelling on their way home, when the Grand Fleet put to sea. The surprising fact remains that the German Staff never attempted a raid in strong force against Dover and the Channel, though there was, as Bacon has shown, nothing to stop a squadron of armoured or battle cruisers.

To deter the Germans from repeating these cruises and protect the Thames mouth a large number of British mines was laid late in March by the British, and during the mine-laying there was a sharp brush between British destroyers of the 9th Flotilla and three large German destroyers. The latter had been rearmed with semi-automatic 4.1-inch guns and were now exceedingly formidable craft. They were beaten off on March 20 with some loss to the British destroyer *Lance*. On March 25 an attempt was made to destroy by British air attack the German Zeppelin sheds behind the island of Sylt, on the Schleswig coast. The force employed was only five seaplanes, conveyed in the aircraft carrier *Vindex* under escort of Tyrwhitt's light craft (five light cruisers, two flotilla leaders, sixteen destroyers M and L classes). Immediately after Tyrwhitt's arrival off the Schleswig coast a torpedo was fired at his flagship, which must have come from the British submarine *H 7*, then in those waters, if it was real. No German submarine was near. To support Tyrwhitt, Beatty's battle cruisers moved out to near Horns Reef.

The five seaplanes left at 5.30 a.m. in heavy snow showers but they effected nothing, as the Zeppelin sheds were not where they had been reported; three of the five machines were lost, and of the two which rejoined the *Vindex* one had not been able to drop any bombs. Meanwhile two German small armed steamers had sighted the flotilla and had been sunk by it, but not before they had given warning of its presence in the Bight; their appearance was followed by that

of German aircraft; and at this juncture the British destroyer *Medusa* was rammed and badly damaged by the *Laverock* in a collision. There was every sign that the Germans were coming out in strength, and shortly after noon the Admiralty from intercepted wireless messages learnt that they were moving and ordered Tyrwhitt to withdraw at once.

Beatty intercepted this message, and, as there was no sign of Tyrwhitt at 2 p.m. pushed into the Bight to the light squadron's support with brilliant initiative, and at 4 sighted Tyrwhitt's force. The weather was now deplorable—a high sea with heavy snow blizzards; the *Medusa* was in a desperate state, and it was necessary to abandon her and take off her crew. By magnificent seamanship on the part of the *Lassoe* this was accomplished. Unfortunately the confidential papers could not be destroyed in the *Medusa*, though there is no reason to believe that they afterwards fell into the hands of the Germans.

The British were retiring without lights in the storm and darkness about 10 p.m. when the commander of the light cruiser *Cleopatra* sighted two German destroyers steaming across his bows, detecting their nationality by the sparks from the funnels, which showed they were burning coal, not oil as did the British destroyers.¹ Steering straight at the second one, G 194, he cut her clean in two and she sank with two great explosions, one probably from a torpedo on board and the other from her boilers, with all on board her. But in the act of ramming the *Cleopatra* herself was rammed by her next astern, the *Undaunted*, and the *Undaunted's* bows were so badly damaged that she could only steam at 6 knots. This was a pretty situation. Tyrwhitt's force was scattered; Beatty was now fifty miles away; and German vessels were at hand and the High Sea Fleet in strength was believed to be fast approaching.

By coolness and luck the British were able to retreat with the damaged cruiser. The Admiralty, learning of the mishap to the *Undaunted* by wireless, ordered Jellicoe to move and Beatty to return to Tyrwhitt's support. If Scheer had struck, long before Jellicoe could have arrived the issue must have been decided. The sea was such that the destroyers could not use their torpedoes or the larger ships their secondary batteries, and this fact and the complete uncertainty as to what the British were doing led Scheer to recall his whole

¹ Many of the German destroyers burnt oil only, but this was apparently not known at that date.

force. The Germans lost besides G 194, the destroyer S 22 (which struck a mine north of Terschelling, in a position where a British minefield was not suspected), and one seaplane. Of the S 22's crew of 93, 16 were saved. The SEYDLITZ and LÜTZOW had narrow escapes from British submarines.

In April, 1916, a strong British demonstration was made to take pressure off the Russians in the Baltic. The whole Grand Fleet swept towards the Bight as the Admiralty had information that the High Sea Fleet was putting to sea. Nothing happened, however. Fog came down and two British battle cruisers, *New Zealand* and *Australia*, damaged one another considerably in a collision on April 22, and had to be sent back to port. The destroyer *Ardent* was also badly damaged and the battleship *Neptune* was run into by a neutral. While this cruise was in progress, Bacon, in the south of the North Sea had ostentatiously laid a barrage of mines and nets to obstruct the exits from Zeebrugge and Ostend. He let the Germans see what he was doing to frighten them and mystify them, and his methods were crowned with some temporary success. During the laying of this barrage, on April 24, there was a brush between four British destroyers of the M class supported by a monitor, and three German destroyers (V 67, V 68 and V 47) in which the *Melpomene* was hit and badly damaged by a long range shell from the German shore batteries.¹

¹ *Nordsee*, v, p. 133.

CHAPTER XXIII

Sinn Fein Rebellion—Lowestoft Bombarded—Eve of Jutland—Scheer's Plans—Grand Fleet Puts to Sea—Composition of the Two Fleets—British Battle Tactics—Tyrwhitt Held Back—British Battle Cruisers and Battle Fleet not in Visual Touch—Time Element in Battle—Beatty Gains Touch with the Germans—He Engages—Odds in his Favour—Rapid German Fire—"Lion" Heavily Hit—"Indefatigable's" End—"Von der Tann's" Armour Pierced—"Queen Mary" Blows Up—Beatty's Firmness in Calamity—German Battle Fleet is Sighted—"Southampton's" Fearless Scouting—5th Battle Squadron's Ordeal.

AFTER its cruise to the Skager Rack in April, 1916, the Grand Fleet returned to port with the three damaged ships, filled up its bunkers on April 24, and that evening once more put to sea. The fact was that indications had been perceived of a German movement in force, such as was expected in view of the Sinn Fein insurrection which had broken out in Ireland. On April 21 the German auxiliary LIBAU had been captured off the Irish coast where she had been sent to land arms; disguised as a neutral tramp, the AUD, she was stopped before she had put her cargo ashore, when her German crew scuttled her. The same day the Sinn Fein leader, Sir R. Casement, was landed from the German submarine U 19 at Ardfer and immediately captured.

Jellicoe, learning that the High Sea Fleet was putting to sea and that its battle cruisers were out, moved at once, hoping to intercept it on its retreat, and sending on Evan-Thomas's fast 5th Battle Squadron to reinforce the British battle cruisers, which were without the damaged *New Zealand* and *Australia*. Tyrwhitt in the south and all the patrol flotillas were on the alert; Bacon was ordered to be



Russell. LORD JELlicOE [*London*
In command of the Grand Fleet till
late in 1916, and then First Sea Lord
at the Admiralty till the close of 1917.
He was in the *Victoria* when she
sank. (Vol. I. 293 ff).



Photo] LORD BEATTY [*Humphrey Joel*
This photograph was taken of him at
the surrender of the German Fleet
in Nov., 1918, when he was taking off
his cap as British crews cheered him.



ADMIRAL SCHEER
He commanded the High Sea Fleet
at Jutland and succeeded in extricating
it from a desperate position by sheer
audacity.



ADMIRAL HIPPER
He commanded the German Battle
Cruiser Squadron and was commonly
known in England in the war as the
"baby-killer" from his bombardment
of Scarborough and Hartlepool.

ready in the Straits of Dover and to withdraw exposed vessels from the Belgian coast. The Germans probably based great expectations on the Irish rising, as they knew little of Sinn Fein incompetence and overestimated the sluggishness of the British Government. In the afternoon of April 24 the whole High Sea Fleet was at sea with twenty-two Dreadnoughts and battle cruisers, five old battleships, twelve small cruisers and forty-eight destroyers. The airship L 7 scouted ahead. At 4 p.m. the SEYDLITZ, leading the battle cruiser line, struck a mine which tore a hole nearly 1,000 square feet in area in her side. With 1,400 tons of water in her she was sent back, and the flag of Rear-Admiral Boedicker (who had temporarily replaced Hipper, then ill) was transferred to the new battle cruiser LÜTZOW. Scheer, none the less, decided to steam towards Lowestoft, supposing, from the information in his possession, that the main British strength was divided into two fleets, one on the Belgian coast and another in the northern North Sea. He hoped to strike between them and attack one or other. His ships were preceded by seven Zeppelins (L 16, L 17, L 20, L 21, L 23, L 13 and L 11). This was the first occasion on which a large fleet of airships had been employed in close co-operation with a fleet of battleships. The airships were over British territory that night and carried out their usual promiscuous, cruel bombing.

About 4 a.m. of April 25 Tyrwhitt, who had displayed his invariable dash, with his three light cruisers (*Conquest*, *Cleopatra*, *Penelope*) and eighteen destroyers, obtained contact with Boedicker's ships (four battle cruisers and four light cruisers with numerous destroyers) off Lowestoft, and saw them open fire on that town, and then steam north to attack Yarmouth. The British submarines which had been intended to defend Lowestoft were able to do nothing, partly, no doubt, because they were hampered by British aircraft which took them for Germans and bombed them. Tyrwhitt tried to draw the Germans off and was so far successful that they turned towards him; his flagship, the *Conquest*, was almost at once hit by a 12-inch salvo from the Lützow with a loss of 40 killed and wounded and great damage, though she was still able to steam 20 knots. The destroyers put up a smoke screen and under cover of it he was able to draw off with no further damage than a hit on the destroyer *Laertes* which put five men out of action. He still kept distant touch when the Germans began their

retirement, and maintained it till he was recalled by the Admiralty wireless.

On his way back the *Penelope* was torpedoed, with only slight damage, by UB 29; that same morning UB 18 torpedoed and sank the British submarine *E 22*, east of Lowestoft in the North Sea. It is to the credit of the crew of UB 18 that, notwithstanding the presence of other British submarines in the neighbourhood, they saved two members of the *E 22*'s complement—a gallant act involving no small risk to themselves. The British trawler, *King Stephen*, was caught and sunk by the Germans, and her crew carried off to be tried for refusing to rescue the *L 19*'s men. As a matter of fact the crew had been changed so that there could be no case against them.

The rounds of ammunition of 6-inch calibre and upwards expended by the Germans in the bombardment and action with the cruisers were 229 fired by the *LÜTZOW*, 151 by the *DERFFLINGER*, 59 by the *MOLTKE*, and 69 by the *VON DER TANN*. In Lowestoft and Yarmouth four persons were killed and 200 houses were wrecked, but nearly all the damage was done at Lowestoft. The Grand Fleet just failed to intercept the Germans on their retreat.

Various steps were taken by the British Admiralty to give a greater degree of protection against these "tip and run" raids on the British coast. Monitors were stationed in the exposed ports and the 3rd Battle Squadron was moved south to the Thames, though being composed of seven old ships of the *King Edward* class it would not be capable of facing the German Dreadnoughts. With it went the 3rd Cruiser Squadron. And as it was specially important to prevent the Germans from detaching powerful ships to the Baltic before the Russian defensive mine-fields had been relaid, for the opening of May Jellicoe planned an air attack on the Schleswig coast, which it was hoped would bring the Germans out in force and secure a battle.

On May 2 the Grand Fleet put to sea, but the air attack on May 4 was a complete failure. Of the nine seaplanes seven failed to rise, one fouled a destroyer and was wrecked, and only one reached German territory, where its bombs effected little. As some offset to this failure Zeppelin *L 7* was hit at long range by a shell from the *Galatea*. *L 7* assumed a vertical position and fell in flames: seven of her crew were rescued by the British submarine *E 31*. The High Sea Fleet, despite scouting by airships and submarines, was not aware that the whole force of the Grand Fleet was at

hand. It was not prepared for an immediate movement, as many of its ships had been at sea on May 2 and 3 covering a great Zeppelin attack on the British coast, in which the Germans lost L 20, driven ashore by a storm in Norway, and had two other airships damaged. The German Staff, however, expecting an attack in the Bight, recalled a number of ships and destroyers from the Baltic, where they were carrying out exercises, so that to some small extent the British operation took pressure off the Russians.

Scheer, in mid May, decided on a bombardment of Sunderland, which he hoped would draw the British fleet well out into the North Sea and give his submarines an opportunity of attacking it. The submarines were available because of the cessation of the ruthless war against merchant ships. Sixteen large U boats with, in addition, six small boats from the Zeebrugge Flotilla, were directed to take up positions off British ports or in the North Sea and to remain there from May 23 to June 1. But by May 25 the British Intelligence Department was on the alert; it had detected the movement to sea of the U boats, which were in the habit of proclaiming their position by wireless, and two or three days later it reached the correct conclusion that some considerable operation was impending, though the precise date and aim could not be ascertained. Meanwhile Scheer changed his plans. The weather was too bad for the use of airships and he feared that if he struck at Sunderland he might be brought to battle with overwhelming force against him. He decided, therefore, to send his cruisers ostentatiously to the Skager Rack and Norwegian coast in the hope of attracting to them some part of the British fleet—in fact, he set a trap for the British battle cruisers.

Simultaneously with Scheer's preparations, Jellicoe had arranged for a movement by the whole Grand Fleet into the Skager Rack; the British destroyers were to push yet farther into the Kattegat and mouth of the Great Belt and Sound. The necessary operation orders were issued on May 29; the movement was to begin on June 1; and the ultimate aim was to force the German fleet to deliver battle. But by noon of May 30 the Admiralty ascertained that a part of the High Sea Fleet was coming out that night.¹ The Admiralty, there-

¹ At 10.48 German Time a wireless signal was made by Scheer ordering all German vessels to concentrate in the outer roads at 8 p.m. that night. This may have been intercepted and in that case the British would naturally calculate that at 2 p.m. on May 31 the German ships would be near the point where Beatty sighted them.

fore, at once warned Jellicoe at Scapa and Beatty at Rosyth; it recalled the Harwich destroyers and the mine-sweepers at work in the North Sea and ordered all British submarines to be on the alert. At 5.16 that evening the battle fleet and battle cruisers were directed by the Admiralty to raise steam, and shortly after, at 5.40 to concentrate in the "Long Forties," sixty miles east of Aberdeen, in the North Sea.

Forthwith the preparatory signal for leaving was hoisted in the various divisions of the fleet; Jellicoe ordered the Scapa ships to be ready to leave the Flow at 9.30. At 8.15 he issued orders to Beatty to steam, economising his destroyers' fuel, to a position in 56 deg. 40 north lat. and 5 deg. east long. (approximately 100 miles west of Lim Fjord on the Jutland coast), where he was to be at 2 p.m. next day (May 31). At that hour Jellicoe stated that he himself would be about seventy miles north-north-west of Beatty's position. Beatty was further directed, if there was no news by 2 p.m. on May 31, to steam northwards towards Jellicoe to get into visual touch, and was informed that Jellicoe would steer for Horns Reef. He was told that Jellicoe might send on to him the 3rd Battle Cruiser Squadron.

The British force was thus composed: At Scapa were the 1st and 4th Battle Squadrons, each consisting of eight Dreadnought battleships and one light cruiser; the 3rd Battle Cruiser Squadron of three battle cruisers (*Invincible* class) with two light cruisers of the 3rd Light Cruiser Squadron; the 2nd Cruiser Squadron (of four armoured cruisers); and one light cruiser, one mine layer (*Abdiel*), and one destroyer attached to the flagship; with the Destroyer Force consisting of one light cruiser, four flotilla leaders and thirty-five destroyers. Several ships were left behind as unready, among them the *Royal Sovereign*, which had just joined. At Cromarty or Invergordon were the 2nd Battle Squadron of eight Dreadnoughts, and one light cruiser; the 1st Cruiser Squadron of four armoured cruisers; one flotilla leader, and ten destroyers. At Rosyth under Beatty were the 1st and 2nd Battle Cruiser Squadrons consisting in all of six battle cruisers; 1st, 2nd and 3rd Light Cruiser Squadrons totalling twelve light cruisers; the 5th Battle Squadron with the four fastest and best battleships in the Navy (the fifth, *Queen Elizabeth*, was in dock); and two light cruisers with twenty-seven destroyers forming the destroyer force. There was also one aircraft carrier, the *Engadine*, with seaplanes on board.¹

¹ See Table XX.

Head of British
Battle Fleet
2 p.m. May 31

SKAGER
RACK

SCENE OF THE BATTLE OF JUTLAND

Head of Beatty's
Force 2 p.m.

Head of Hipper's
Force 2 p.m. May 31

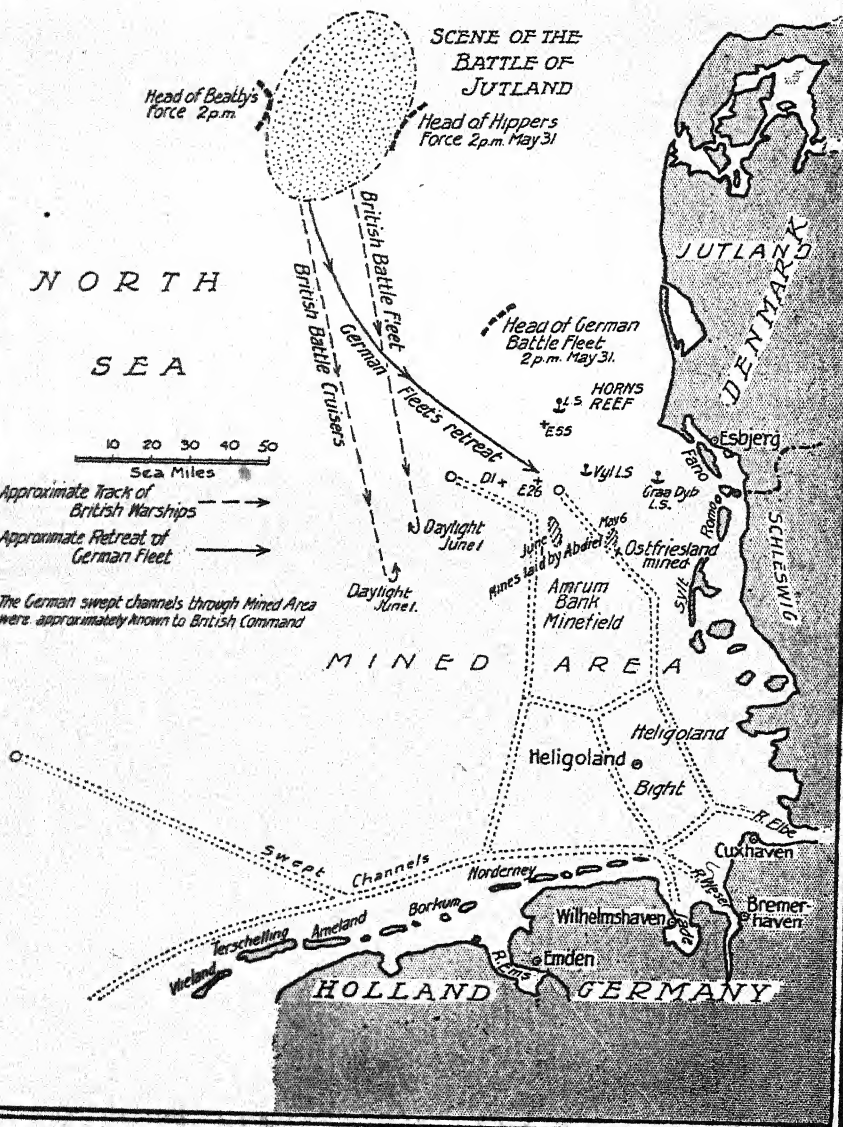
NORTH
SEA

10 20 30 40 50
Sea Miles

Approximate Track of
British Warships

Approximate Retreat of
German Fleet

The German swept channels through Mined Area
were approximately known to British Command



PLAN 32

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BATTLE OF JUTLAND. GENERAL MOVEMENTS

This shows how the German Fleet escaped, passing behind the British.

The German force consisted of the 3rd Squadron (seven Dreadnoughts strong); 1st Squadron (eight Dreadnoughts strong), with, in addition, the flagship of the fleet (a Dreadnought battleship); and the 2nd Squadron (six pre-Dreadnoughts); the 1st Scouting Group of five battle cruisers; 2nd and 3rd Scouting Groups totalling nine light cruisers; and the destroyer force consisting of two light cruisers and sixty-two large destroyers (one of which had to return to port before battle).¹ A comparison of ships gives the following results:—

	Battle-ships, Dreadn't type.	Battle-Cruisers.	Pre-Dread-nought Battle-ships.	Armoured Cruisers.	Light Cruisers.	Flotilla Leaders.	Des- troys.
British	28	9	0	8	26	5	74
German	16	5	6	0	11	0	61

On paper the preponderance of the British in every element of apparent fighting power was marked. The German pre-Dreadnought battleships were a source of danger rather than strength, because of their low speed, which at this date did not exceed 17 knots if it reached that figure. Of the German light cruisers three were of ancient type.

There were no flotilla leaders, so rated, in the German destroyer force, but against this may be set the fact that at this date, with a few exceptions, the German destroyers were rather more powerfully armed than the British, owing to the general introduction in them of the 4.1-inch gun firing a 38-lb. shell (against the British 4-inch firing a 31-lb. shell).¹ The older armament of 3.4-inch (22-pounder) guns had been replaced. Moreover, certain of the German destroyers—B 97 and B 98 for example—were as large as British flotilla leaders. Of the German light cruisers, five carried a heavier battery (seven 6-inch guns) than any British light cruiser of that date except the *Chester* and *Birkenhead*. It will be observed that the German Navy had been forced, by experience, to follow the British lead in the matter of giving its cruisers and destroyers powerful batteries. As the Japanese found in 1904 that their destroyers were too weakly armed for the fighting which devolves in war on small craft, so the Germans discovered that the 3.4-inch gun was dangerously inferior against the British 4-inch, and the 4.1-inch against the British 6-inch.

¹ *Engineer*, June 25, 1920.

Invisible on paper but very real were certain defects in the heavy armoured British ships. The armour protection was much less than in the German ships of corresponding class, but against this was to be set the much heavier battery carried. In the German ships special measures had been taken after the experience of the battle of the Dogger Bank to give greater protection against the flash of shells in the magazines; in the British ships nothing whatever had been done. In the German ships, again as the result of that battle, the range-finders had been improved for work at extreme ranges; in the British ships there had been no corresponding improvement, though German officers regarded the British director system as distinctly superior to the German.¹

The British battle tactics of this date involved adherence to the line of battle in line ahead, in one long inflexible formation, manœuvred by the commander-in-chief. Nelson, as all know, during the later years of his life was constantly occupied with the extraordinarily difficult problem of directing an effective attack on an enemy with a large fleet. Nelson's final decision was to make his order of sailing the order of battle and to attack in three separate squadrons, the second and third of which should be under admirals exercising full initiative. He adopted this plan, as he tells us, because of the time occupied in getting ships into one long line of battle; and because of the risk that, with such evolutions, if the visibility was bad, as it so often is at sea, the enemy would escape before a decision could be reached.² Those were sailing days, but what applies to a line of sailing ships may equally well apply to a line of steam or motor ships. He had seen a good deal of lines of battle at sea and knew their defectiveness in action.

In the Japanese battle organisation, which rested on experience, an effort was always made to place a flag officer and a powerful unit at each end of each squadron or division, so that if the direction had to be reversed by turning the ships in the line simultaneously there would be an admiral in the van and a vessel able to strike hard and take punishment. Neither the British nor the German dispositions arranged for this. In the steaming formation of the main British Battle

¹ Hase, p. 158.

² Nicolas, *Despatches of Nelson*, vii, p. 89. Nelson gave captains a large initiative in this same memorandum (p. 91). So before the Nile he took care that his captains were familiar with his ideas and left them almost complete liberty of action. Laughton, *Nelson's Despatches*, p. 150.

Fleet for the approach, the old-type armoured cruisers were placed in advance of the battle fleet which steamed in columns of divisions line-ahead. These armoured cruisers had the disadvantage of being comparatively slow (sea-speed about 21 or 22 knots against 26 or 27 in the later British light cruisers), of being extremely vulnerable to the fire of battle cruisers or Dreadnought battleships, and of making dense clouds of smoke when increasing to full speed.¹ From their low speed they could not steam quickly out of the line of fire, if contact was made unexpectedly with the Germans, and their smoke would blanket the guns of the battle fleet in the critical opening minutes of action.

Both Jellicoe and Beatty knew, so far as information of the German plans was concerned, that a large force of German cruisers was at sea, with numerous U boats. The direction and purpose of the German movement were uncertain. It might be against the 10th Cruiser Squadron, covering the blockade in the north of the North sea; it might be against one of the east coast ports, to repeat the Lowestoft or Scarborough bombardments; it might even be the prelude to a raid on the Channel. That the German Battle Fleet was ready, was known; but the Intelligence service supposed it to be in the Jade, as wireless calls for Scheer were being put through to the Third Signal Station at Wilhelmshaven.² On previous occasions when the German Battle Fleet had been out this precaution had been adopted by the German command, so it was not entirely conclusive as to the position of that fleet. But up to 11 a.m. on the following day the reports from the British directional wireless stations placed the German battleships in harbour. In this case wireless indications proved misleading to the British. On their part the Germans were quite unaware that Jellicoe, with the main British Battle Fleet, was steaming towards the Bight of Heligoland, or that the 5th Battle Squadron, the most formidable force in either fleet, was moving in close touch with Beatty.

The British Admiralty, in uncertainty as to the German intentions, took a most unfortunate step. Instead of concentrating the whole available strength of the Navy on the Bight of Heligoland it held back Tyrwhitt's powerful light force, consisting at this date of five light cruisers, two flotilla leaders and seventeen destroyers, together with the 3rd Battle Squadron of seven *King Edwards* and 3rd Cruiser

¹ *Jutland Despatches*, p. 287.

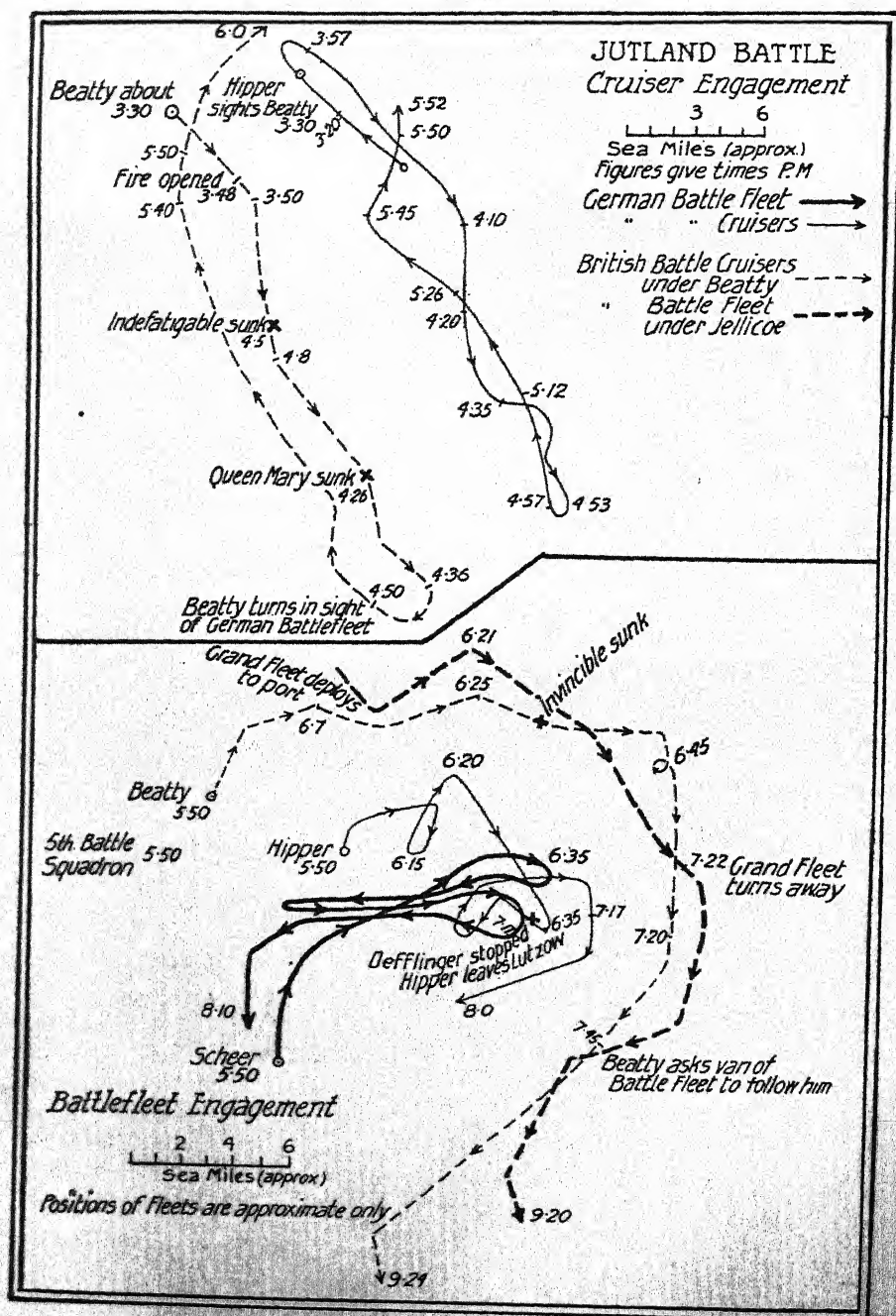
² *Nordsee*, v, p. 214.

Squadron of four armoured cruisers at the Nore. In combination with Jellicoe's fleet and Beatty's battle cruisers this force of Tyrwhitt's, boldly led by an enterprising officer, would have been capable of great things.

Contrary to what might have been expected, the German U boats were able to send little information of the British movements. U 66 sighted and unsuccessfully attacked the 2nd Battle Squadron steaming eastward from Cromarty to the rendezvous with Jellicoe, and U 32 sighted two large ships and some small ones of Beatty's force. But their messages told Scheer little and, beyond a report that two battleships or battle squadrons had left Scapa, he did not obtain any important information from the German wireless listening station at Neumünster. His airship scouting had broken down from weather conditions.¹ Scheer's march formation, with his twenty-four battleships in line ahead, was not hampered by a number of old cruisers in its van; and if the battle was to be fought in line ahead it had this advantage that no deployment would be necessary. The German dispositions were not by any means faultless. The six old battleships were massed together in the rear, which threatened disaster if an alert adversary concentrated on that end of the line. In both fleets the flagship was near the centre of the battle formation. The German battle cruisers, with the five best light cruisers and thirty destroyers, were 45 to 50 miles in advance of the battle fleet.

The British dispositions were afterwards much criticised for their failure to secure closer contact between the Battle Fleet and the Battle Cruiser Force, towards the hour when it was expected to sight the Germans (2 p.m. of May 31). If the two sections of the Grand Fleet had been in visual touch, transmission of the exact position at which the antagonist was sighted would have been facilitated and mistakes have been prevented. It is true that the Germans made no effort to secure such visual touch between the two parts of their fleet, but then they seem to have put to sea with the firm conviction that the British, in inferior force, were going to steam into their midst and be destroyed. The neglect to ensure visual touch was undoubtedly, in the light of subsequent events, a serious omission. For though it was

¹ L. 14, L. 23, L. 21, L. 9 and L. 16 were up in the afternoon of May 31, but saw and heard nothing of the battle, though two of them were over the zone of fighting. The British sea-plane ship *Campania*, was left behind at Scapa, but in view of the German failure in air reconnaissance, her absence probably had no serious effect.

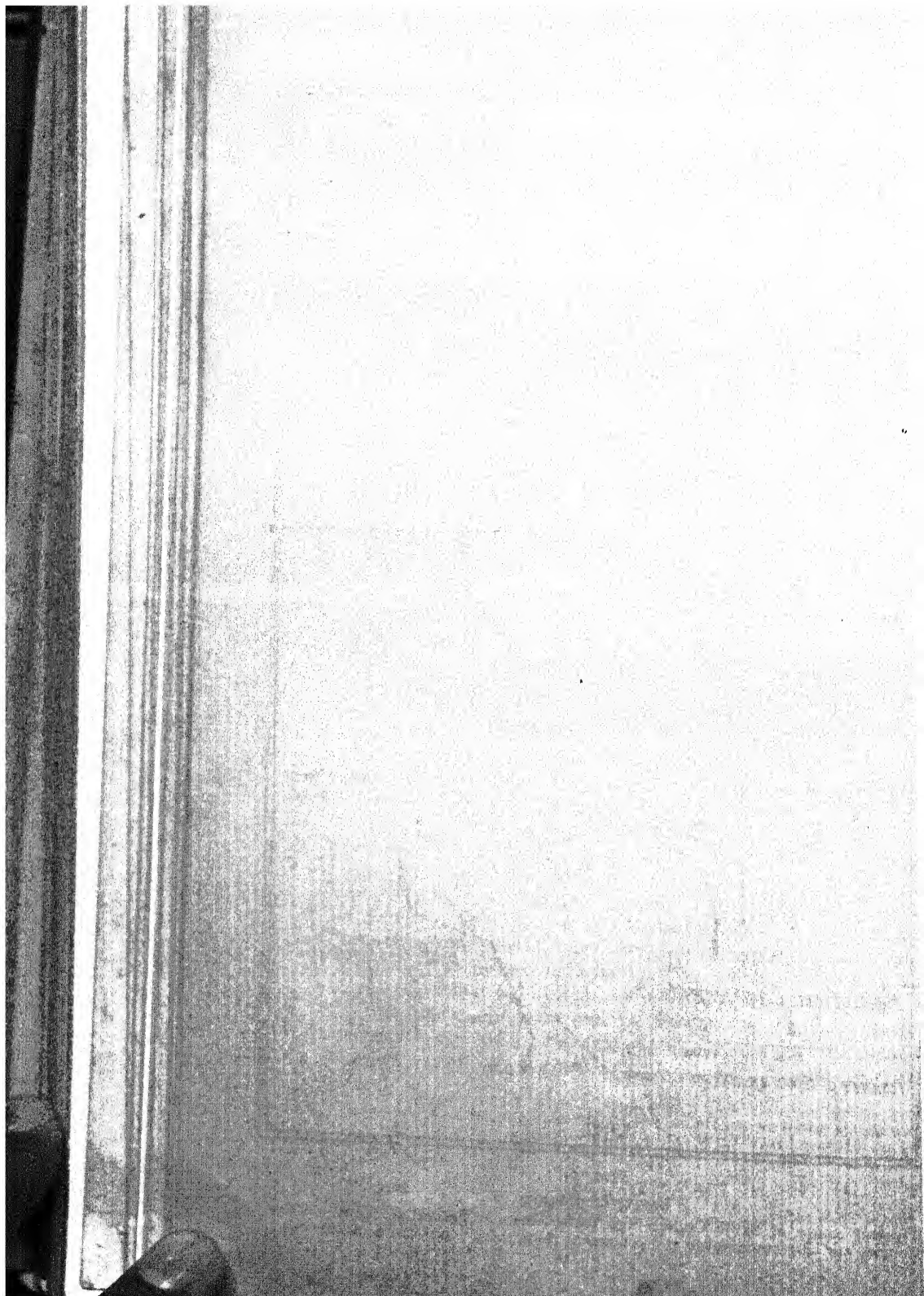


PLAN 33

BATTLE OF JUTLAND I

[p. 132

General course of Battle Cruisers and Battle Fleets in the critical hours. These courses are only approximate and concerning them there is still much controversy.



assumed in the Grand Fleet that the German Battle Fleet was not coming out, there was always the risk that it might appear. The Germans were not fools, and they were not likely to leave their cruisers unsupported. In that case the closer the touch and the shorter the distance between the two sections of the Grand Fleet, the greater the probability of dealing a decisive blow, or preventing a German concentration on the Battle Cruiser Force.

The view in the Grand Fleet was that the six battle cruisers were quite capable of taking care of themselves. With the four fast battleships of the 5th Battle Squadron (which would give Beatty ten large armoured ships) it looked as though the British Battle Cruiser Force was certain of crushing the German battle cruisers before they could be supported, if they were far ahead of their Battle Fleet, or of drawing away from them if they were in close touch with that fleet. In the latter condition the ten heavy British ships, all superior in speed to anything in the German Battle Fleet, could retire on their own main force, and their fire would be sufficiently powerful to drive back the German fast ships. But it would have strengthened Beatty and not have weakened the Battle Fleet had Jellicoe sent on fast in advance Hood with the three battle cruisers of the 3rd Battle Cruiser Squadron.

In view of the all-importance of time in a battle in the North Sea where space is limited and fog and mist are apt to interfere, the British plans might have been expected to aim at an earlier concentration of the whole fleet in the area where contact with the Germans was expected. Without any immoderate effort the intended positions could have been reached an hour sooner, and by deflecting the course of the Battle Fleet towards the south the distance between the two sections of the fleet could have been diminished by twenty or thirty miles. A decisive battle requires time, and all the evidence in the possession of the British Navy in May, 1916, suggested that it would be a difficult and slow business to sink well armoured German ships in action.

The battle of the Falklands took about eight hours and that of the Dogger Bank three hours. Of earlier battles, Tsushima opened on May 27, 1905, at 2 p.m., and the Japanese had not completed their work by nightfall; the battle of August 10, 1904, opened at 12.30 p.m., and at nightfall no decisive victory had been gained. At Trafalgar, fighting an antagonist whose forces were weakened by revolution, the British required $5\frac{1}{2}$ hours to win a complete victory; at the Nile,

the battle occupied the whole night. It was in keeping with this underestimate of the importance of time that the Battle Fleet on its way towards its position delayed to examine the neutrals it sighted. There was, however, always the risk that they might be disguised German mine-layers or commerce-destroyers. The low average rate of speed at which the Battle Fleet moved was favourable to the British destroyers, whose limited fuel supply it economised; this was a consideration of importance, but it ought not to have been allowed to interfere with operations when there was a chance of destroying a substantial part of the German Fleet.

The night of May 30-31 passed in either fleet without incident. Towards noon next day, May 31, the British Battle Fleet detected strong German wireless signals; about the same time Neumünster wireless station reported to Scheer that a wireless signal had been issued at Rosyth giving the weather, and that such a signal was only made as a rule when British naval forces were at sea.¹ At 2 p.m. of May 31 Beatty was ten miles west of the appointed position for that hour, to the west-south-west of Little Fisher Bank. The Battle Fleet was nineteen and a half miles from its appointed position and was over an hour late. In accordance with his orders Beatty was to turn towards the Battle Fleet at 2,² if he saw nothing.

At this particular moment eleven light cruisers with the Battle Cruiser Force were spread on a long line eight miles ahead of the heavy ships. The battle cruisers, *Lion*, *Princess Royal*, *Queen Mary* and *Tiger*, were in line ahead with the *New Zealand* and *Indefatigable* three miles north-east of the *Lion*, and the four battleships of the 5th Battle Squadron in line ahead, five miles to the north-west of the *Lion*. At 2.10, the *Galatea* on the extreme port wing of the light cruiser screen sighted a two-funnelled vessel which had stopped the Danish steamer U Fjord, eight miles away to the east-south-east. The *Galatea* was nineteen miles east-north-east of Beatty and she signalled that she was closing the strange vessel, which was actually B 109, one of the powerful destroyers in the screen covering the German battle cruisers. At 2.15 the whole Battle Cruiser Force turned northward, when, three minutes later, at 2.18, the *Galatea*

¹ The chief signals on the German side are in an appendix to *Nordsee*, v.

² Times are British (G.M.T.). German standard time was one hour in advance of British (and this time is used in the German Official History). German summer time was two hours in advance of the British, and this time is used by Hase and Scheer. When it was a by British time, it was 3 by German standard and 4 by German summer time.

reported "enemy in sight." The Germans were slower; not till 2.27 did the light cruiser ELBING on the starboard wing of the German screen report "enemy armoured cruisers in view to the north-west," and it happened that this signal was wrong as to the type of ship sighted.

The *Galatea* opened fire on the hostile destroyer at 2.28, the first shots of that eventful day, and as the note of the guns rang out over the grey waters the British light cruisers began to close upon her to enter battle. There was a light south-west wind and the sea was slight.¹ Beatty altered his course at 2.32 to the south-south-east, and raised his speed to 22 knots from 19, to get between the Germans and the Bight of Heligoland. Through the whole Battle Fleet ran a thrill of expectation when Jellicoe at 2.35 ordered all his ships to raise steam for full speed. He was then going 15 knots. At 2.45 Jellicoe increased to 17 knots, turned towards the point where the Germans had been located, and at 3.18 increased speed to 19 knots.

As Beatty turned his battle cruisers towards the Germans so Hipper turned his battle cruisers towards the British, increasing from 16 knots to full speed. The *Galatea* fell back on the main British force, to lead the Germans to it, reporting at 2.39 a large amount of smoke, as if from a fleet to the east-north-east. She was already engaged with the German light cruiser ELBING (28½ knots, seven 6-inch guns) which made the first hit of the battle on her, under the bridge, though the shell did not explode.²

For several minutes long range firing between the light cruisers of the two antagonists continued. A seaplane was hoisted out by the *Engadine* and went up at 3.8. It could accomplish little though it was gallantly handled; visibility was bad, and it saw only four cruisers and ten destroyers; moreover, none of its signals went through. The Battle Cruiser Force was now steering north-east to close the Germans; unfortunately during the alterations of course, the 5th Battle Squadron had fallen seriously out of station and was nine miles instead of five (the distance ordered) from Beatty. It subsequently reduced this distance somewhat but was still dangerously out of station when contact with the German heavy ships was obtained. There is good reason for

¹ Hase, p. 153. The British Official Narrative, p. 13, states the wind was SE, which is probably a misprint for SW. The German Official History makes the wind WSW. Jellicoe states it was WSW with Force 2 (*Grand Fleet*, p. 355).

² The Germans reported tracks of torpedoes near the Lützow at 2.50, but they must have been imaginary.

saying that if this squadron had had more practice at sea with the battle cruisers it would have been up to or ahead of station. But it was comparatively new to the work and its position astern was another example to prove that long and assiduous training in company is necessary for the highest efficiency in squadrons in war.

At 3.30 Beatty sighted Hipper's five battle cruisers steaming at 25 knots west-north-west, and a little sooner Hipper made out British heavy ships moving towards him at 25 knots. Hipper, in accordance with the usual German tactics, immediately recalled his light craft, turned his battle cruisers in succession forming a line of bearing, and steamed away from the British, towards the German Battle Fleet, in order to lead the British to it. Beatty turned directly toward his antagonists, and ordered his battle cruisers to form a line of bearing, and when Hipper reversed his course, followed him.

For this he had been criticised on two grounds. The first is that in following Hipper he was acting as the Germans desired, and that in war it is never wise to do as the enemy wishes. The second is that, in view of the gap between the battle cruisers and the 5th Battle Squadron, he ought to have concentrated his force before engaging. Both criticisms are sound in principle, but lose sight of two considerations. The first is that the aim of the whole British operation was to bring on a decisive battle. Beatty could only concentrate his force by falling back with his battle cruisers on the 5th Battle Squadron or by reducing speed, in order to let the 5th Battle Squadron come up.

In either case it is practically certain that Hipper would have used the pause to get south and deprive Beatty of his advantageous strategical position,¹ and having once got south Hipper would never have delayed to fight ten heavy ships in line. He would have steamed off, and as his ships were faster than the 5th Battle Squadron, Beatty would have been confronted with the choice between letting him go and fighting him in a less advantageous situation with the six British battle cruisers, which last ships could alone overtake him. The second consideration is that the Admiralty intelligence and Jellicoe's dispositions assumed that the German Battle Fleet was 200 miles away. If it were out, contrary to information but in accordance with sound

¹ In 1917 I was so fortunate as to hear the opinions of various flag-officers concerned in the battle on this point. They all agreed that if Beatty had not attacked at once, Hipper would have raced off.

strategy, Beatty felt himself strong enough to strike the five German battle cruisers a severe blow before they could obtain support.

In weight of metal the odds on his side were 5 to 3; in displacement 145 to 118; and in number of battle cruisers he was 6 to 5.¹ Moreover, the extreme range of the *Tiger's* 13.5-inch guns was 24,000 yards and that of the *Lion's*, *Princess Royal's* and *Queen Mary's* guns was 23,000 yards and slightly superior to the best German ships in this respect. The LÜTZOW's and DERFFLINGER's 12-inch weapons could fire 20,300 yards; the SEYDLITZ with her 11-inch guns, 21,870 yards; and the VON DER TANN 22,400 against the 18,500 yards of the *Indefatigable's* and *New Zealand's* 12-inch guns.² At extreme ranges, if accurate shooting had been possible, the British should have had a distinct advantage. This was no case of rashly attacking a much superior enemy.

At 3.40 Hipper signalled to his ships to take up targets from the left. This meant that the LÜTZOW would fire at the *Lion*, the DERFFLINGER at the *Princess Royal*, the SEYDLITZ at the *Queen Mary*, the MOLTKE at the *Tiger*, and the VON DER TANN at the *Indefatigable*³ (the rear ship), leaving the *New Zealand*, last but one in the line, unengaged. At 3.46 Beatty signalled an order for the *Lion* and *Princess Royal* to concentrate fire on the leading German ship, LÜTZOW. Missing this signal, the *Queen Mary* seems to have assumed that the *Princess Royal* was firing at the second German ship, DERFFLINGER, and trained her own guns on the third in the enemy line, SEYDLITZ; the *Tiger* and *New Zealand* both chose the MOLTKE as their antagonist and the *Indefatigable* trained on the VON DER TANN. The DERFFLINGER was left unengaged in the early critical moments of the battle.

The Germans were surprised that the British did not open fire while still outside the range of the German guns. The reason was that the visibility to the east was poor; there was a slight mist which blended admirably with the light grey paint of the German ships,⁴ and the British range-finders at that great distance did not give satisfactory results. The British ships, on the other hand, were outlined against the western sky, which was clear of mist. At 3.48 simultaneously

¹ After the war and after the test of the battle Signor S. Orlando in an expert estimate gave Beatty's six ships only nine-tenths the value of Hipper's five. (*Engineering*, Jan. 14, 1921). But no one believed this in May, 1916.

² *Nordsee*, v, p. 235.

³ The tendency to concentrate on the rear ship in a line was distinctly marked in the Japan-Russia War.

⁴ *Jutland Despatches*, pp. 192-3, 199, 212.

BATTLESHIPS IN ACTION [May 31

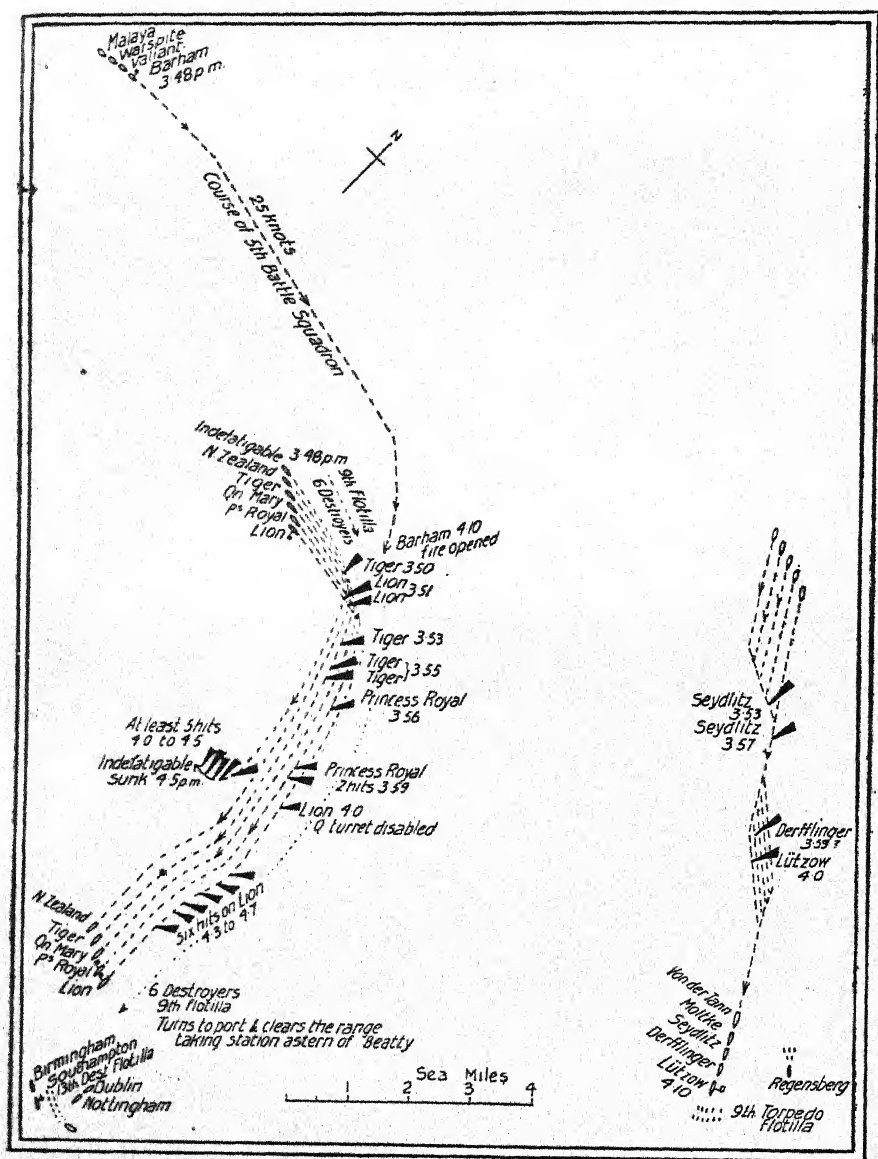
in both fleets the order was given to open fire, and the salvoes (of one gun per turret) thundered along the two battle lines as the eleven ships travelled south-eastward at 25 or 26 knots. The German shooting was rapid and accurate¹ at ranges which varied from 10,000 to 17,000 yards.

The first blood went to the MOLTKE, which, about 3.50, hit the *Tiger's* forecastle, and then, some minutes later, hit two of the *Tiger's* turrets, putting both temporarily out of action. A fourth hit under one of the 6-inch guns did little damage. About the same time the LÜTZOW hit the *Lion* twice, inflicting heavy casualties upon the crews of the 4-inch guns, but doing no serious damage to the ship. Twice in this period of the battle was the SEYDLITZ hit by the *Queen Mary*; the first hit put the starboard forward electric switchboard out of action; the second pierced the armour and exploded in the working chamber of one of the amidships turrets. It set fire to the supply of 11-inch ammunition there. The changes made after the Battle of the Dogger Bank prevented a disaster. Most of the turret crew perished in the rush of flames and gas, but the adjacent magazine was flooded in time to avert its explosion, though the turret was put permanently out of action.

At 4 p.m. the LÜTZOW received her first hit from the *Princess Royal*, but was not seriously injured. So far the DERFFLINGER, MOLTKE and VON DER TANN had not been touched; they were firing salvoes at the rate of one every twenty or twenty-five seconds, while, according to the Germans, the British salvoes were slow and uncertain.² The new German instruments showed up every detail of the British ships and enabled hits to be accurately observed, whereas the British were groping in uncertainty, owing partly to the mist and partly to the lack of appliances as powerful as the Germans possessed.³ The difficulties of the British battle cruisers were increased by the 9th Destroyer Flotilla which was steaming on the engaged side and making dense smoke as it endeavoured to get into a favourable position to attack the Germans.

The range shortened to about 13,000 yards, and the greater rapidity of the German fire produced speedy results. The *Princess Royal* was hit three times, the first hit putting

¹ The DERFFLINGER, however, was four minutes in straddling the *Princess Royal*. (Hase, p. 147).
² Nordsee, v. p. 237. Cf. Fawcett and Hooper (First Edition) pp. 105-6. The *Lion* seems only to have fired two salvoes while the Lützow fired four.
³ Admiral O. de B. Brock ascribes the more rapid German fire to conditions of light and wind. *Jutland Despatches*, p. 147.



PLAN 34

[p. 138

BATTLE OF JUTLAND II

Big gun hits shown by black marks, with name of ship hit. The British battle cruisers show up against a fairly clear western sky, while the German battle cruisers are to some extent screened by mist; hence many German and few British hits. The figures give the hour p.m. by British time.

her fire control temporarily out of action. At 4.0 the *Lion* received her most dangerous hit. A shell from the *Lützow* struck Q turret amidships, perforated the armour, and burst inside over the left gun, killing or severely wounding most of the officers and men in the turret and working chamber. Major F. J. W. Harvey, in command of the Marines working the turret, was mortally wounded, but in the hour of death he gave orders to close the magazine doors and flood the magazines, and reported what had happened by one of the wounded in the turret who could walk. Fire smouldered in the turret among the dead and dying, and in the heat of the battle it could not be reached nor could the turret be cleared. Presently it caught the ammunition in the turret and trunk hoists; a great rush of flame rose from the *Lion* amidships to a height of 200 feet, but though all save two men in the turret and compartments near perished, the ship was saved by Harvey's heroic act, which was honoured by a posthumous V.C.

Shortly after this terrible rush of flame was seen from the *Lion's* amidships turret, catastrophe befell the *Indefatigable*. In her duel with the *VON DER TANN* she had made no hits. At 4.2 three 11-inch shells struck her about the level of the mainmast and dense clouds of smoke were noticed rising from her; at the same time she turned (possibly because her steering gear was injured) to starboard out of the line, with a distinct list to port.¹ Immediately afterwards she was hit by at least two more 11-inch shells, one on the fore-castle and one on the fore-turret; there was a perceptible interval of time, and then there rose forward from her hull a sheet of flame followed by an immense cloud of dense dark smoke, in which large objects could be made out, among them a picket boat upside down in the air. The smoke lifted and as it lifted the *Indefatigable* was gone (4.5 p.m.) after seventeen minutes of firing, with only two survivors.

The *New Zealand* at once shifted target from the *MOLTKE* to the *VON DER TANN*, but at this grave moment the 5th Battle Squadron began to engage, though as yet at extreme range (19,000 yards) and under extreme difficulties of light, as its fire-control officers could see nothing but flashes of guns to aim at. The smoke of battle cruisers and destroyers, of the bursting shells, of the many fires in the ships, and of the guns intensified the original light mist to the east, and now only at considerable intervals could the dim forms of German

¹ Fawcett and Hooper, (First Edition), p. 31.

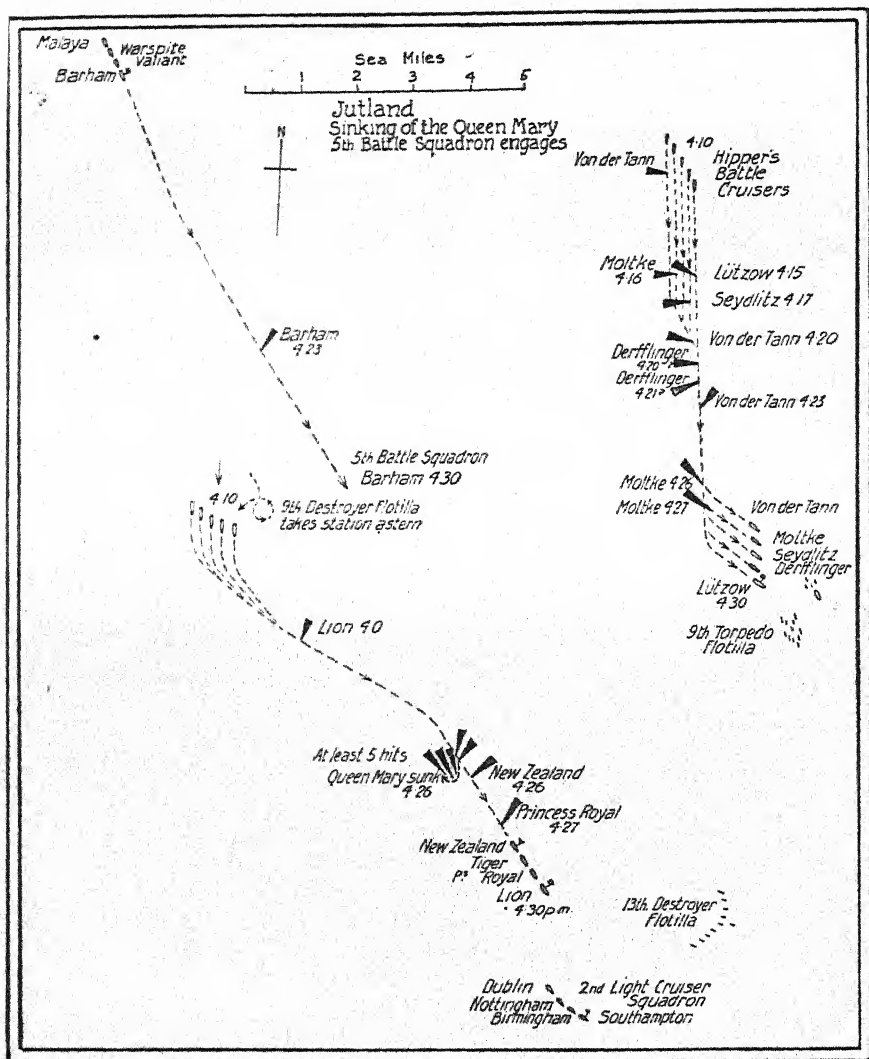
ships be seen and the brilliant scarlet flashes of their guns be made out, flickering for an instant, while the British ships still stood out clear against the western sky. The German fire was good; between 4.3 and 4.7 the *Lion* was hit six times but without sustaining vital injury, though she was set on fire again and again and lost heavily in men. At this point of the battle the MOLTKE discharged four torpedoes at the British, all of which missed.

Beatty closed in somewhat, as the range had gradually risen to 20,000 yards, and he ordered the 13th Destroyer Flotilla to attack (eleven boats each three 4-inch guns and four 21-inch tubes). The first phase of the action was over and in it the Germans had made twenty-one hits with heavy guns and the British only four; two on the SEYDLITZ, one on the DERFFLINGER (not shown in the German battle chart), and one on the LÜTZOW. The hit on the DERFFLINGER was on a 6-inch casemate and caused considerable damage. One turret was out of action of the twenty-two in the German squadron; in the British squadron one ship had been sunk, and in the remaining five three of the twenty turrets were out of action.

Soon after 4 the Germans observed torpedo tracks, which must have been imaginary. The fire of the 5th Battle Squadron, though at extreme range, was already becoming effective on the German rear. The VON DER TANN between 4.12 and 4.23 was hit three times. One of the hits was on her forward 11-inch turret. The armour was pierced, and the turret put out of action, but the explosive effect¹ of the shell was so small that only a few men were wounded; another shell put the after 11-inch turret temporarily out of action. Yet a third shell from the *Barham* struck her stern on the waterline, pierced the armour, and filled the steering compartment, but without damaging the steering gear. Her third turret broke down, and she was left with only two heavy guns effective, and with 600 tons of water in her hull. It was fortunate for her that dense smoke from the fires which broke out in her concealed her from the *New Zealand*, and from the British battleships.

The MOLTKE was hit three times in this period, but the German accounts report no very serious damage to her. The *New Zealand* sustained one hit without damage. Of the other German ships, the LÜTZOW was heavily hit at 4.15; the SEYD-

¹ Probably this was common shell (*Jutland Despatches*, pp. 199-201.) Had it been a powerful high explosive shell the career of the VON DER TANN might have been ended then and there.

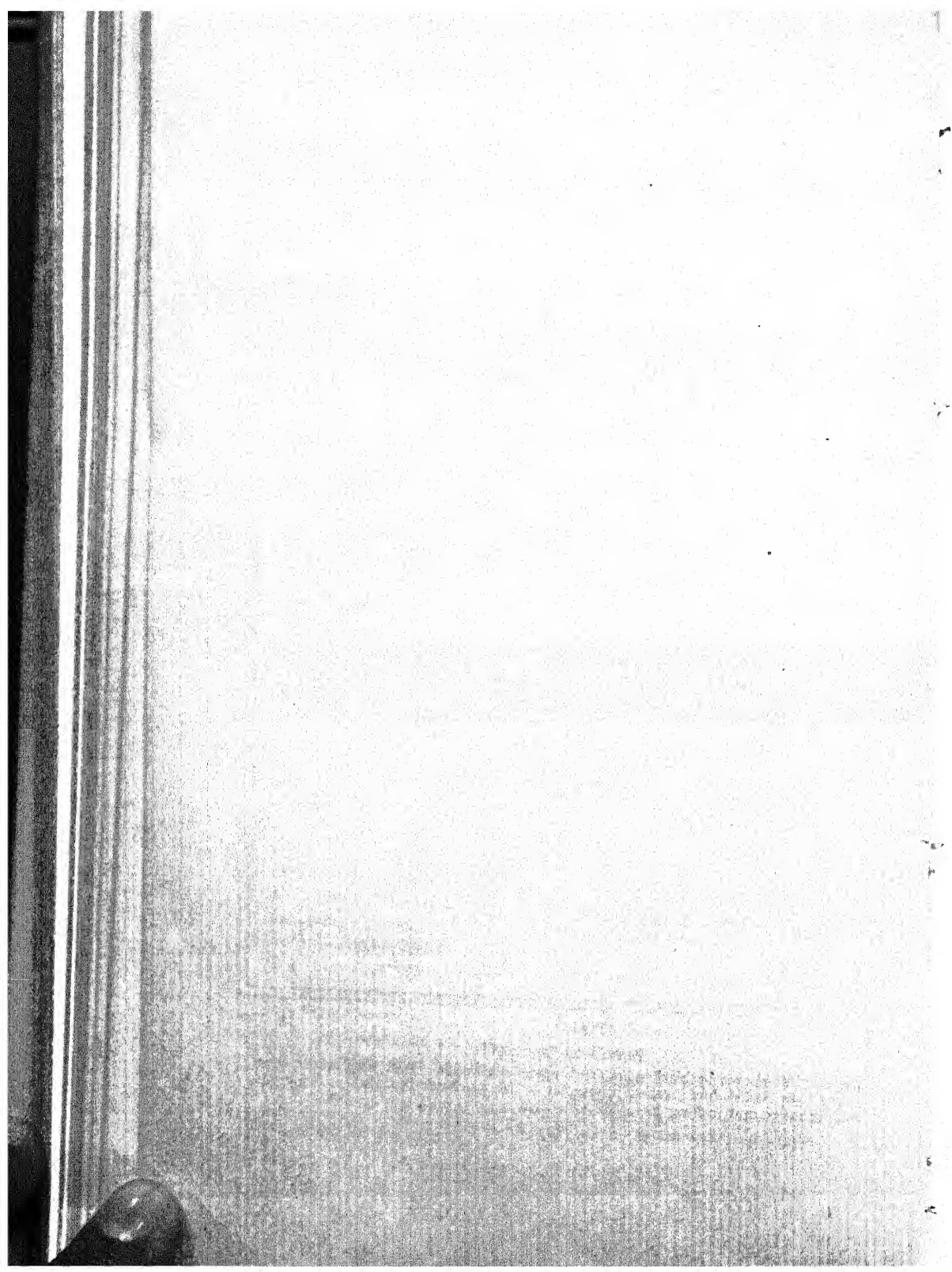


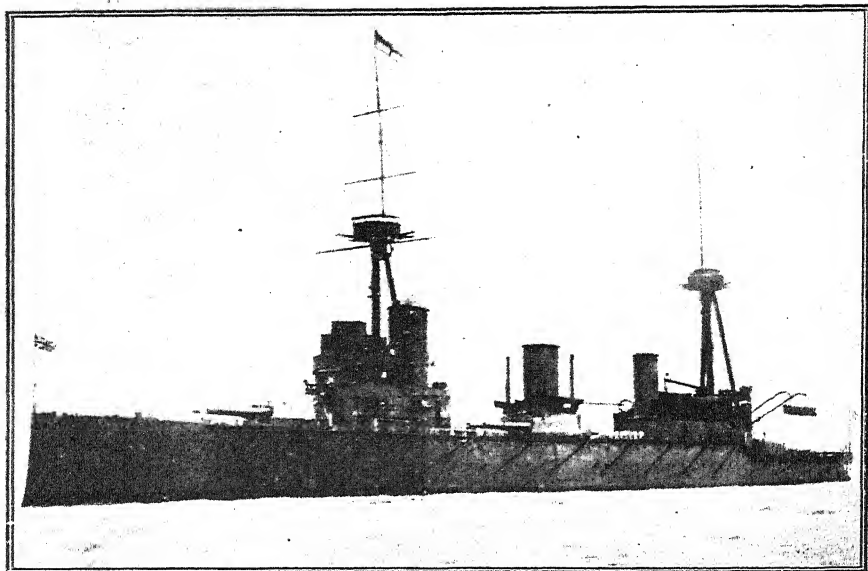
PLAN 35

[p. 140

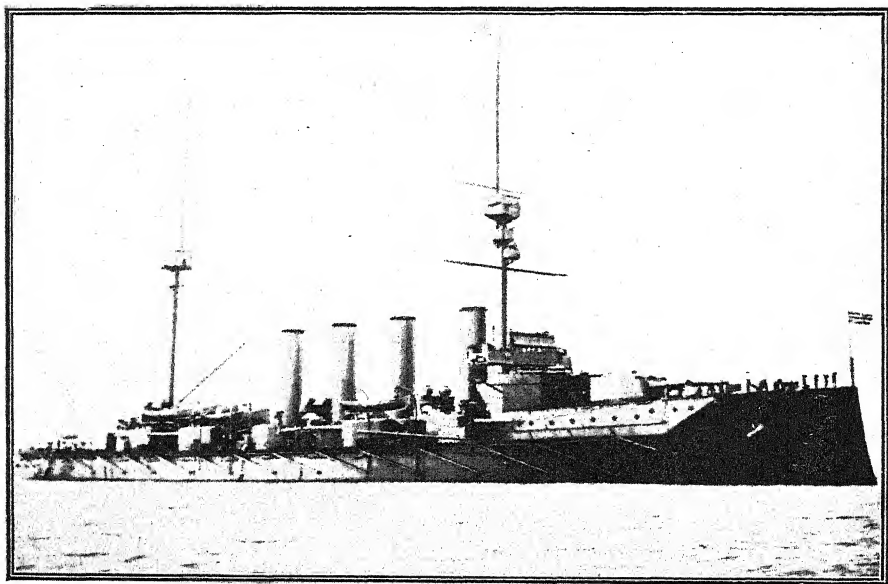
BATTLE OF JUTLAND III

Big gun hits shown by black marks with name of ship hit. With the improvement of the light British hits increase in number. The 5th Battle Squadron is firing but at long range and making hits.





THE BRITISH BATTLE CRUISER "INDEFATIGABLE," SUNK AT JUTLAND
 She took part in the operations against the *Goeben* at the opening of the war. At Jutland she came last in the line of Beatty's battle cruisers. She was seen to be heavily hit near the mainmast and then on the fore turret, when the flash from the German shells passed down to her magazine and she blew up. [See p. 139]



THE ARMOURD CRUISER "DEFENCE," SUNK AT JUTLAND
 She flew Sir R. Arbuthnot's flag, and attacking at Jutland the German cruisers—as was her duty—suddenly came under the fire of the German Dreadnoughts and was destroyed with every soul in her, 893 officers and men. [See p. 151]

LITZ at 4.17; and the DERFFLINGER twice by shells from the *Queen Mary*. Of the ships towards the head of the British line the *Lion* was hit about 4.8 and her main wireless put out of action. The *Tiger* was hit twice with no great damage. In the 5th Battle Squadron the *Barham* was hit at extreme range and the splinters of the German shell damaged a model of the ship by some strange accident just in the places where subsequent shells struck the vessel herself. The German diagrams incorrectly claim in this period two hits (instead of one) on the *New Zealand*, and omit both hits on the DERFFLINGER.

At 4.24 or 4.26 occurred a second catastrophe in the British line of battle. For some minutes the DERFFLINGER and SEYDLITZ had engaged the *Queen Mary* with concentrated fire—eighteen guns against eight at a range of about 15,000 yards. According to the German accounts the *Queen Mary* was shooting superbly and fast—"usually" with full salvos,¹ i.e. eight 13.5-inch projectiles. But her salvos were almost invariably short or over, and in all only three hits had been made on the DERFFLINGER, at which ship she was firing. The concentration of two ships against her, shooting accurately with the German type of projectiles, was disastrous to the *Queen Mary*. Between 4.24 and 4.26 the DERFFLINGER fired six salvos (or twenty-four 12-inch shells) which straddled the *Queen Mary*. From neighbouring ships it was seen that at least three² heavy shells hit her forward and a brilliant flame shot up from her hull. Immediately afterwards a salvo struck her amidships, near Q turret, which had already been heavily hit, and this salvo was followed by dense clouds of smoke and brilliant flame.

Masses of steel with incredible quantities of paper were blown into the air and along with them a boat upside down. The roofs of her turrets were projected upwards to a height of 100 feet.³ A column of smoke shot up to an enormous height—1,000 or 1,400 feet—mushroom shaped and intensely black. Her next astern, the *Tiger*, had to steer through the dreadful shower of wreckage of every kind and to alter course to avoid the smoking, riven hull. As the column of fire and smoke sank the *Queen Mary* disappeared; the stern part of

¹ So Hase, pp. 157-8. But full salvos were used only in most exceptional circumstances, because they strained the ship; and it is doubtful if he is right.

² Hase states that of his last six salvos every one straddled the *Queen Mary*; and the SEYDLITZ was also firing at her, with similar accuracy. It is quite possible that at this period she was hit by fifteen to twenty projectiles, and certainly she must have been hit by more than five.

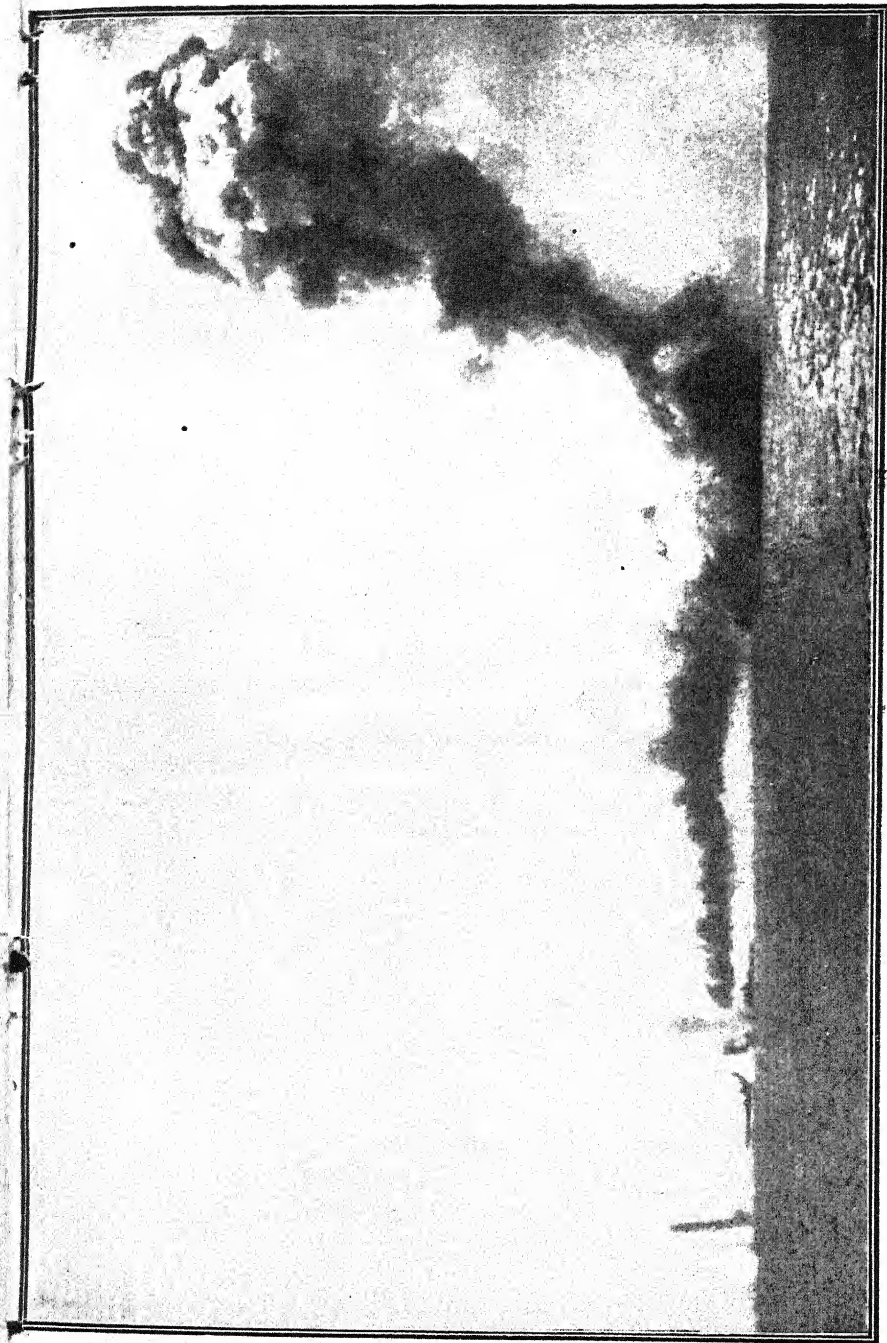
³ Fawcett and Hooper, (First Edition) p. 32.

the ship was the last to go with propellers still revolving above the water and men crawling out of the after turret. It vanished in a great final explosion.

This second stunning disaster did not shake Beatty's resolution. A weaker admiral might have drawn off, for the loss of this second ship was a clear indication that there was some structural defect in the British battle cruisers. The courage which their admiral showed in this hour of supreme trial was shown by officers and men. In the *Queen Mary* all remained steadfast at their stations to the end, even when they must have been aware that all hope had passed. "I am confident," says Gunner's Mate E. Francis of X turret, one of the few survivors, in his simple account of the catastrophe, "knowing the *Queen Mary* as I did, that the highest traditions of the service were upheld." There could be no better epitaph on a ship which ended nobly, fighting to the last in the presence of a formidable enemy.

Meanwhile between the big ships developed a fierce encounter as the British 9th Flotilla steamed in to attack the Germans with magnificent dash and determination, and the 9th German Flotilla led by the light cruiser REGENSBURG (seven 6-inch guns, 28 knots) advanced with equal spirit to meet it and deliver an attack on Beatty. The struggle was furious and the British boats entered it at a disadvantage as they were thrown into some confusion by the light cruiser *Nottingham* which steamed through their formation just as they were getting into action. Under the fire of the heavy ships the destroyers engaged one another between the two lines of battle. Breaking past the German boats the British destroyer *Petard* got within 7,000 yards of the German battle cruisers. She discharged three torpedoes, one of which struck the SEYDLITZ forward, inflicting only small damage. The side was blown in at Station 14, but the armoured torpedo bulkhead inboard from the side did not give way, though 2,000 tons of water poured into the ship. The SEYDLITZ took a slight list, yet her speed was not affected and for some time the injury had little influence on her fighting power. The *Petard* also hit the German destroyer V 29 with a torpedo, which sank that boat. V 27 about the same time was heavily hit by gunfire and sunk.

Each line of big ships turned away during the destroyer onslaught, Beatty's turn being very slight and Hipper's marked. Up to this point the Germans had made at least thirty-three heavy hits on the British and the British at least



THE EXPLOSION AT JUTLAND WHICH DESTROYED THE "QUEEN MARY"

This extraordinary illustration is a composite of two views taken from the British destroyer *Lyddard*, both on the same scale. To the left is the *Lion*, Beatty's flagship, with a German salvo falling short of her. To the right is the terrible cloud of smoke rising from the *Queen Mary* to an enormous height. The base of the cloud is the length of the *Queen Mary*, 675 feet.

[By kind permission from Fawcett & Hooper's *Fighting at Jutland*.

fifteen or sixteen on the Germans; the British battle cruisers had five of their sixteen turrets out of action; in the German battle cruisers five¹ of the twenty-two turrets were out of action. In the 5th Battle Squadron all the turrets were intact. The position of the Germans was critical; their gun crews were wearying, and they had still odds of two to one against them; moreover, the light, which had so far favoured Hipper, might at any moment change and the British fire (which the Germans stated was good) would then at once become more effective, despite the poor quality of the British shells. But at 4.33 the British light cruiser *Southampton*, scouting well in advance of Beatty's battle cruisers to the south-east, signalled by flashlight to Beatty, "Battleships south-east," and followed this at 4.38 with this grave signal by wireless: "Urgent. Priority. Have sighted enemy's battle fleet bearing approximately south-east, course of enemy north. My position Lat. 56 deg. 34 north, Long. 6 deg. 20 east."

Stretching interminably to the south, the German Battle Fleet could be dimly made out, coming up at 15 knots. It steered first north-west and then west, to strike the British and get upon their line of retreat. In the van were the seven powerful battleships of the KÖNIG class, good for twenty-two knots, and in the centre eight older Dreadnoughts of the OSTFRIESLAND and POSEN classes, led by the flagship FREDRICH DER GROSSE. Owing to errors which are almost inevitable in work at sea, the position of the *Southampton* was wrongly reported, the mistake being one of several miles. The error would not affect Beatty who was in visual touch with the *Southampton*, but it would affect Jellicoe and the battle fleet and lead them to suppose that the German main force was six or seven miles further to the east than it really was.

The tremendous news that the German Battle Fleet was out and close at hand led Beatty at once at 4.40 to make a general signal to his ships to turn 16 points in succession, which meant that the order of the squadrons was maintained but that squadrons were to reverse their course. Almost immediately afterwards from the bridge of the *Lion* the German battleships came into sight, and at 4.45 Beatty signalled to Jellicoe by wireless through the *Princess Royal* (his own wireless being out of action):—"Urgent. Priority. Have sighted enemy's battle fleet bearing south-east. My

¹ It is believed one turret was out of action in the Lützow; one was disabled in the Seydlitz; and three in the Von der Tann.

position Lat. 56 deg. 36 north, Long. 6 deg. 04 east." The message was received in the *Iron Duke* in mutilated form: "twenty-six or thirty battleships, probably hostile, bearing south-south-east, steering south-east." But other messages left no doubt as to the general character of the German movement or the fact that the hostile battle fleet was at hand. At 4.51 Jellicoe signalled to the Admiralty that a fleet action was imminent.

The gallant remnant of the 9th Destroyer Flotilla fired at least ten torpedoes at the German Battle Fleet and thus screened Beatty during the critical moments when he was turning his battered battle cruisers northwards, though the destroyers *Nestor* and *Nomad* were sunk in this bold onslaught. With splendid tenacity, the *Southampton* at extreme risk to herself,¹ maintained touch with the German Battle Fleet and observed its movements and organisation, correctly reporting its formation as line ahead, and distinguishing the ships in the van. It was a superb piece of scouting to be compared with that accomplished by the Japanese light ships before Tsushima, but with this difference, that from about 4.45 the *Southampton* was under a heavy fire from excellent gunners and had to be manœuvred at each German salvo to avoid destruction.² In such circumstances errors of position due to slight inaccuracies in difficult calculations were to be expected. Until 5.50 the *Southampton* continued to emit wireless signals, as she maintained her fearless watch, though naturally she increased her distance from the Germans; but most of that time she and the other cruisers of the 2nd Light Cruiser Squadron were the targets of numerous heavy guns, and their escape was almost miraculous.

One serious mistake was made by a part of Beatty's force when it reversed its course. The 5th Battle Squadron did not immediately turn northwards, but continued for two or three minutes to steer southward, thus approaching the German Battle Fleet and risking destruction. This error again was due to want of continued practice with the battle cruisers and full knowledge of Beatty's methods of leadership. It was one of his characteristics to expect a high degree of initiative from his subordinates and to look to them to act without orders. The Squadron came under a concentrated fire from the German Battle Fleet, but though three of its

¹ In similar circumstances the *WIESBADEN* was disabled before she could do anything and the *Chester* terribly damaged.

² See Fawcett and Hooper (First Edition) p. 71, for the risks run in this protracted salvo dodging.

ships, among them the flagship *Barham*, were heavily hit, and the *Barham's* main wireless was disabled, there was no disaster, nor was any turret put out of action by the German projectiles. The value of thick armour was signally proved during this test. The Germans were no longer shooting so well as at first, despite the odds in their favour. Their hits were about seventeen; the British hits, with much fewer ships in action, were at least ten, and many of them were inflicted with the 15-inch shell.¹ Six salvoes a minute were falling round the *Malaya*, the last ship in the British line, and her fire control could not distinguish the German battleships and make effective reply. To screen her from the hostile shells the order was given to fire the 6-inch guns short, so as to throw up huge sheets of water. Before this could be done a shell burst in her and caused a fearful cordite fire, which put the whole of the starboard 6-inch guns out of action with 102 casualties. Flames rose high as her masts and spouted from the 6-inch gunports, but the ship did not blow up. A 12-inch shell struck the roof of X turret in the same vessel; it did not perforate the armour or cause serious damage.

¹ The weight of this shell was almost exactly twice that of the heaviest German projectiles, and its power should theoretically have been four times as great.

CHAPTER XXIV

Hood Approaches the Battle—Beatty Obtains Contact with Jellicoe—Arbuthnot and Hood Drive in the German Screen—Jellicoe's Battle Fleet Comes Down Unobserved—It Delays its Deployment—Difficulties of Deployment—End of the "Defence"—"Invincible" Blows Up—British Battle Fleet Deploys to Port—Scheer's Daring Manœuvre—Terrific British Fire on the Germans—British Fail to Close—Scheer Orders Hipper to Charge—British Fire Smothers this Onset—Critical Position of the Germans—Beatty Asks Aid from the Battle Fleet—It is Given Too Late—British Destroyers Recalled.

THE British Battle Cruiser Force was now steaming north or north-west at 25 knots with the whole German Fleet in pursuit. From the north-west and north-east aid was approaching. At 4.5 Jellicoe had ordered the 3rd Battle Cruiser Squadron under Hood to proceed at once to Beatty's support. Some twenty-five miles to the east of Jellicoe this squadron was steaming south with the light cruiser *Chester* as lookout. Hood raised his speed to 25 knots; Jellicoe ordered 20 knots at 3.59 for the battleships and at 5.4 directed his cruisers to take up station for the approach. Hood's direction of movement was such as to prevent German ships from retiring to the Skager Rack without an engagement. This was not intended and was due to errors of position in the calculations of the two sections of the British Fleet. He was coming down towards the Germans from the north-east with his three battle cruisers, a screen of four destroyers, and on his east flank, the light cruiser *Canterbury*.

In the space between the two forces of heavy ships, a minor destroyer engagement continued; the German 11th Half Flotilla (three large destroyers) fired eight torpedoes without result at the British battle cruisers, and was easily driven back.

Beatty increased speed to the utmost to obtain touch with Jellicoe's Battle Fleet, and drew out of action for some minutes, it being his intention to work round the head of the German advance. The German impression appears to have been that he had been finally driven off. About this time the British fire inflicted serious damage on the LÜTZOW, putting both her main and reserve wireless out of action; in the DERFFLINGER a water-line hit was sustained; in the SEYDLITZ in quick succession two turrets were hit and disabled and in each an ammunition fire destroyed all or almost all the turret crews. Three of her five turrets were out of action, and one of the guns in another was hit and disabled. The last turret in the VON DER TANN broke down and the ship could do no more than fire her secondary battery. The German battleships received two hits on the water line. But they succeeded somewhat unexpectedly in keeping the four British battleships of the 5th Battle Squadron under their fire for a considerable time, though the British were going 25 knots and the Germans only 22 or 22½. It was supposed in the British Fleet that the Germans were faster than their nominal speed, but the truth was that they were moving on a converging course or on an inside curve.

In the German battle cruisers this phase of the battle caused acute depression. The British were firing at ranges where the Germans could make no effective reply, and the British were making hits. Moreover, the light which had so far so signally favoured the Germans, was beginning to change. To the west the setting sun was emerging from the clouds which had dimmed its radiance and about 5.30 it dazzled the German gunners and spotters so that they could not see how their salvoes were falling. They were, too, disappointed that the terrific concentration of fire on the 5th Battle Squadron had produced so little visible effect. At 5.33 Beatty's northernmost cruiser, the *Falmouth*, neared the advance cruiser of Jellicoe's cruiser screen, the *Black Prince*, and visual contact with Jellicoe's force was at last established. To the east and south-east, however, smoke and mist screened the two adversaries struggling for victory.

As yet the Germans knew nothing of the forces which were coming up from north-east and north-west; and Jellicoe from an error in calculating his own position and from the erroneous positions given in the signals of the cruisers with Beatty, placed the latter twelve miles east of his real position. At 5.40 Beatty renewed his fire on the German battle cruisers

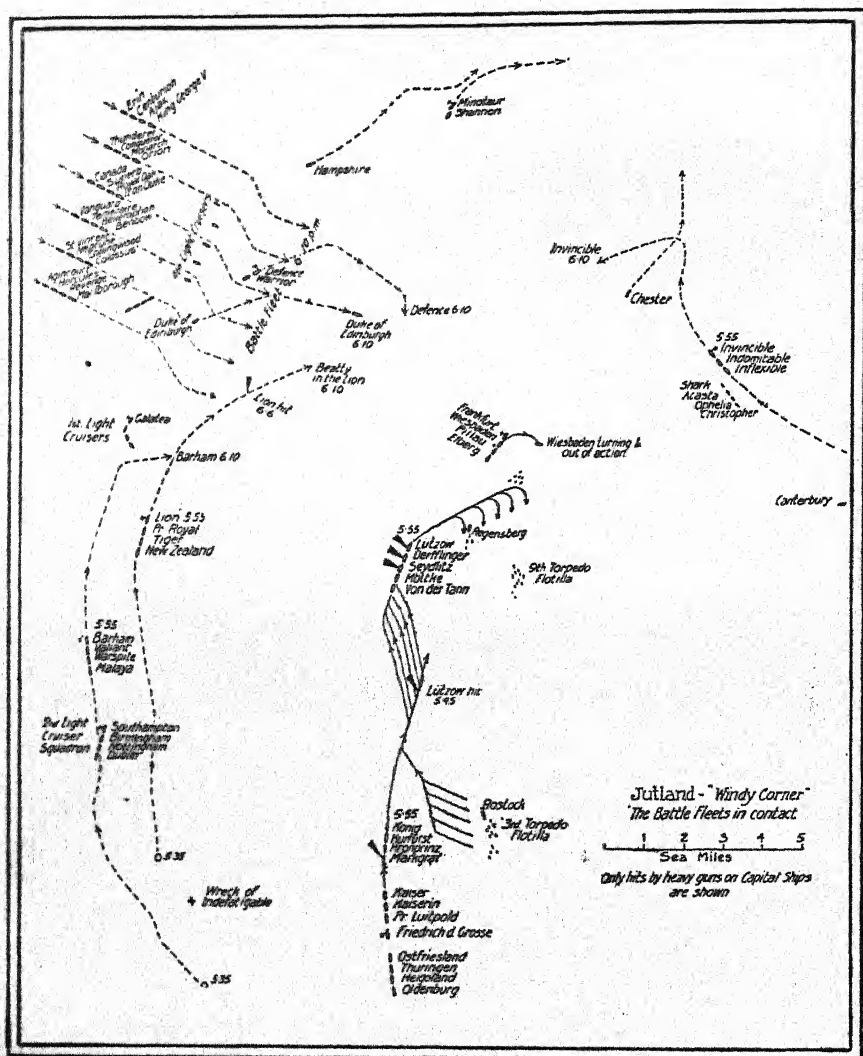
at the head of the German advance. The alteration of light was reversing the position; between 5.45 and 5.55 his ships made five hits on the Germans and received none. He steamed north-east and placed himself across the line of the German advance. His manœuvre has been justly praised by Scheer as brilliantly executed and conceived.

The German line, owing to the hasty pursuit of the British and the comfortable assumption that Beatty would have no support, had fallen into some disorder. A great gap separated the Dreadnoughts from the old battleships and compelled the Dreadnoughts to reduce speed first to 18 knots and then to 15. In the German battle cruisers exhaustion among the stokers and clinking in the furnaces, which had not been cleaned since 3 p.m., was lowering the speed, and the British ships, despite the terrific punishment to which they had been subjected, were able to rush away from their antagonists.

About the time that Beatty came into touch with Jellicoe's cruisers, the *Chester* sighted the flash of guns and heard the heavy sound of firing towards the south-west. She steamed toward the flashes and almost at once was engaged by five German light cruisers of the newest type and numerous destroyers. So powerful was the concentration against her that she was fortunate to escape; at the third salvo¹ she was badly hit; and she was finally driven back with three guns out of action and 76 casualties, among them First Class Boy Jack Cornwell, who mortally wounded, remained at his station, setting an example of devotion to all, and was posthumously honoured with the V.C.

At once Hood led his battle cruisers to the *Chester's* support and opened on the German ships. At 6 p.m. the leading German light cruiser FRANKFURT signalled by wireless news which must have filled the German Staff with alarm: "Am under fire of enemy battleships"; and one minute later the light cruiser WIESBADEN, in the same scouting group with the FRANKFURT, reported herself unable to manœuvre, with her engines out of action. Arbuthnot in the *Defence*, flagship of the 1st Cruiser Squadron, in the advanced screen of Jellicoe's battleships, had sighted at 5.46 ships in action to the south-south-west steering north-east, and at 5.50 had come on the WIESBADEN and with the *Warrior* opened fire on her, almost at the same moment as Hood's 12-inch shells began to hit her.

¹ Fawcett and Hooper (First Edition) p. 235.



PLAN 36

[p. 148

JUTLAND IV

Hits shown by black marks. North and South line lies diagonally across the diagram from top left to bottom right hand corner. The light is now favouring the British and the Germans are being severely hit while the British are almost invisible. Defence is advancing to destroy the German light cruisers and cover Jellicoe's deployment.

At 5.45 the British battleships with Jellicoe were coming down from the north-west in six parallel columns, each of four ships 400 yards apart, disposed at intervals of one mile between the columns. They were still in approach formation, whereas the German Fleet was deployed. The movements in the British cruiser screen ahead indicated the proximity of the battle; a dull and continuous thunder had been heard for several minutes, but the visibility was so bad that little could be seen except occasional flickerings as the heavy guns fired. Officers in the battleships anxiously asked themselves when the Grand Fleet was going to deploy. Its approach was not detected in the High Sea Fleet as all attention was concentrated upon the mysterious battleships coming down from the north-east, which were really Hood's ships; and Arbuthnot's and Hood's attack on the leading German cruisers had completely driven in the German advanced screen. The opportunity for a stunning blow, dealt by an enormous force arriving unsuspected on the scene of battle, seemed to offer at 6 p.m.

The British scheme of tactics was not equal to the situation. Notwithstanding such experience as that at Tsushima, where Togo despite all the admirable work of his cruisers, found it necessary at the last moment to alter his arrangements and turn under the hostile fire, it had seemingly been assumed in the Grand Fleet that the course and exact order and formation of the antagonists could be exactly determined before deployment took place. The Battle Fleet would then place itself at right angles to the direction of the German advance and attack with the utmost effect. Calculations such as this might have been fulfilled if close visual touch had been maintained between the two parts of the British Fleet; but otherwise the practical difficulties of action when wireless gear and stations are shot away, observers and navigators are thrown about by the terrific concussion of heavy firing and the explosion of the enemy's shells, and the whole scene of fighting is veiled in mist or smoke were pretty certain to bring them to naught.

Beatty has been blamed for failing to report to Jellicoe the exact course and position of the German Battle Fleet, though the Admiralty wireless was sending out the correct position of the German Battle Fleet, as ascertained by directional wireless, from about 4 p.m. onwards, and though Beatty's cruisers were making continual reports, which gave a good idea even if there were errors in them. The conclusion will be that a

system of tactics which demands the enemy's exact course and position before taking up one's battle formation is not fit for the conditions of a great fleet action. It ignores realities of battle.

Of the admirals in the Grand Fleet, Sturdee, who had a considerable reputation as a tactician, thought it would have been best to deploy on reaching the scene of action, and expected the admirals at the van or rear to take the initiative and close with the enemy. He himself was stationed in the centre close to Jellicoe so that he could not act. He was, further, in favour of deploying to starboard, in which case the 5th Battle Squadron and Beatty's four battle cruisers were in a good position to cover the deployment. A deployment to starboard would have brought the British into a line ahead on an opposite course to the Germans, but it would have facilitated an annihilating attack on the old German battleships at the rear of Scheer's line and have forced the German Dreadnoughts to go to their aid. Though, normally, a battle passing on opposite courses will be indecisive, yet here there were special conditions favouring a decision. But for such a deployment to give great results it ought to have begun at 6 p.m., or even before. It did not begin, and Beatty had to pass at full speed across the front of the fleet in order to clear the range and obtain a favourable tactical position.

In that quarter German destroyers were violently engaged with Hood's four destroyers which had advanced to the attack with such dash that they were taken by the German for the screen of the Battle Fleet. The odds against the British were heavy, and they were quickly beaten off by the German destroyers, which sank the *Shark* and disabled the *Acasta* with the aid of the German light cruisers. So far as can be learnt from the signals published, the German destroyers and cruisers failed to detect and report to Scheer the exact strength and character of the British vessels near them. Beatty's quick movement east and Hood's sudden appearance placed the Germans in so dangerous a position that Jellicoe was able to deploy almost undisturbed, when at length at 6.15 the signal to do so to port (i.e. to the east) and after deployment to steam south-east by east, was made by flags. The German Official History remarks very justly that the effect produced by Hood's three ships shows the possibilities of squadrons manœuvring independently of the main force.

There was a good deal of difficulty and confusion when the deployment began, due to the lateness of the order for it, and

the mass of vessels to be manœuvred, and some of the ships in the Battle Fleet were already straddled when the signal for it was made at length. The cruiser screen had drawn too close to the battleships, partly because of mist and bad visibility, partly because of the low speed of some of the cruisers in the screen relatively to the battleships, and partly because contact with Beatty and proximity to the Germans made it difficult for them to get clear. The light cruisers, the old armoured cruisers and the destroyers made dense smoke as they hurried out of the line of fire, while Beatty's four battle cruisers, in one of which a bad fire was burning, also made much smoke as they steamed to the east to take station in the van of the British line.

Beatty in his eastward movement found the *Defence* coming down on him and had to alter course to avoid that ship which passed extraordinarily close. She was firing at the WIESBADEN and the other light German cruisers at the head of the German line, and in the mist and smoke apparently could see nothing of the heavy German ships which were near at hand. Upon her, the *Warrior*, and *Black Prince*, about 6.18 the LÜTZOW, GROSSER KURFÜRST, MARKGRAF, KRONPRINZ and KAISER opened fire—the LÜTZOW at a range of only 7,000 yards. Two salvos in quick succession were seen to hit the *Defence*; a sea of flame glowed beneath her fore turret; and then there shot up an immense column of flame and black smoke with masses of debris. In that upheaval Arbuthnot and every soul on board perished. The *Warrior* was terribly hit by at least fifteen heavy shells, one of which entered the engine room on the port side and burst in the centre bulkhead. A great fire broke out on the main deck, and but for a strange accident the ship would have suffered the fate of the *Defence*.

The 5th Battle Squadron when, contrary to the expectation of its commander, the main Battle Fleet deployed to port, had to take station at the stern of the line. To do this Evan Thomas had to turn his squadron to port, and during the turn he approached the German Battle Fleet somewhat closely. In making the turn the *Warspite's* helm jammed and she came sharply round to starboard, all but colliding with the *Valiant*. Before the helm could be got under control the *Warspite* described a great circle towards the Germans and passed between the *Warrior* and the line of German battleships, receiving a violent concentrated fire from six Dreadnoughts. They hit her some seven times with 12-inch

projectiles but she survived this ordeal. The damage to her hull was such, however, that she could no longer steam more than 16 knots and was difficult to handle. She received orders to proceed to Rosyth, and thus the first British battleship was out of action. But at least her intervention took the fire off the *Warrior* and enabled that ship to escape. The *Black Prince* was near the *Warrior* and was also able to get away. What damage she had received is not known as she was sunk with all in her later in the night.

One more great catastrophe was to befall the British Fleet. Hood came up fast from the east to join Beatty, and at 6.20 turned and took station well ahead of the rest of the battle cruisers. His three ships had eluded torpedoes which the German destroyers fired at them; at 6.20 they engaged the leading German battle cruiser, apparently the *Lützow*, and the range sank to 8,000 yards. The *Lützow*'s fire was weak and her forecastle was ablaze. At 6.30, the *Invincible*, just as she was hitting well, was engaged by the *DERFFLINGER* and *Lützow* at 10,000 yards, and sunk. She was first hit astern and then struck by a salvo about Q turret, a most vulnerable point amidships in the British battle cruisers. The roof of Q turret was blown clean off,¹ immediately after which terrific explosions took place exactly as in the *Indefatigable*, *Queen Mary* and *Defence*; the ship broke in two about the centre; and when the flames and smoke vanished, there were left only six survivors,² drifting on a raft, who cheered the British battleships. Hood perished with his flagship, the second British admiral to pass to immortality on that day. Both ends of the great battle cruiser remained emerging from the water for some time, and the wreck was afterwards used to fix the positions in the battle.

Jellicoe's deployment, if much delayed, and made to port instead of starboard, none the less placed the British Battle Fleet in a position of distinct advantage. He states that he waited because in the mist and smoke it was difficult or impossible to know where the German Battle Fleet was, as gun flashes ran half round the horizon. He decided to deploy to port, away from the Germans for two reasons. On his starboard wing was the 1st Battle Squadron containing a number of older Dreadnoughts with poor armour protection. He also thought that a large German destroyer force was

¹ As in the *Lion*, where a part of the roof was left lying on the deck. The fore turret must also have been hit as flames shot up from it.

² Cf. Schoultz, pp. 247-8. For *Lützow*'s account, see note p. 194.

close to that wing, so that a mass torpedo attack as it deployed, was to be feared. In actual fact the Germans were not particularly near; no destroyers were within effective torpedo range; and three powerful ships of the 5th Battle Squadron, intact in all their turrets, were available to strengthen the head of the British line if Jellicoe had turned to starboard. This was one of the cases where a determination to take the offensive with the extremest vigour might have yielded precious results. As for the risk of the Germans crossing the British T (which has also been given as a reason for deploying to port), that could be avoided by a simple manoeuvre familiar to every British officer, and the Germans were much more likely to have had their T crossed by an alertly-led British Fleet.

Just before it deployed the British Battle Fleet had swerved to the south and the signal was made in the 5th Division of the 1st Battle Squadron: "Remember the traditions of the Glorious 1st of June—avenge Belgium." As the fleet deployed to port, it formed a line running roughly north-east, and this line then turned in succession to the south-east by east. The visibility was in its favour despite the smoke and mist to the south. Extraordinary as it may appear, Scheer even then had no clear idea of the British position or force. The first vague inkling of it came apparently from the leading destroyer of the 5th Flotilla which signalled at 6.25 "according to statements of prisoners from the destroyer *Nomad*, sixty large ships are near with twenty new battleships and six battle cruisers."

This startling report was followed at 6.36 by a signal from Scheer to his fleet to execute a simultaneous turn of 16 points, reversing the direction of movement so that the sternmost ship led. Such a manoeuvre, which we are told by Scheer had been thoroughly practised in his fleet, gave the German line of battle a flexibility that the British line entirely lacked. It was executed brilliantly under the most intimidating circumstances, nor was Scheer deterred from executing it by the fact that it placed the old pre-Dreadnoughts in his van. Rarely has a leader at sea taken such liberties with an antagonist or faced such risks, though he had no idea of the force which was operating against him. The German movement was not detected from the British Fleet, perhaps because it was considered impossible in that fleet thus to turn a large number of ships.

The twenty-four battleships of the Grand Fleet were now in the formation of an L upside down about 6.25. Speed

had been lowered to 14 knots and the line was "bunching," but it was almost invisible to the Germans and several of its ships had opened an effective fire. The German gunners could not see any target to shoot at as the flashes from the guns of an invisible array of enemies ran from west to east along the northern horizon. The LÜTZOW was hit again and again and was put out of action about 6.35. The KÖNIG, at the head of the 3rd German Division, was hit heavily four times and the MARKGRAF once. V 48, caught between the lines, was disabled by a British heavy projectile and sank later with all on board, after she had apparently fired several torpedoes ineffectively at the British. Between the fleets the WIESBADEN blazed furiously, a floating pyre for her crew, and received the fire of numerous British battleships, but she diverted their guns from the real targets in the German battle line.

The moment had come for the British battleships to turn in. But no movement to close with the enemy was made. About the German line, as it reversed its direction, smoke screens were put up by destroyers, apparently on their own initiative, and these embarrassed the British command and the control of the British guns. The German battle cruisers at the extreme eastern end of the German line were in pitiable state. The LÜTZOW was little more than a floating target for the British, though she could still steam 15 knots. The DERFFLINGER, in a momentary lull from the attack of the British shells, had to stop two minutes to clear away her torpedo nets which hung loose astern and threatened to foul her screws. The SEYDLITZ was terribly battered; the VON DER TANN had not one single heavy gun able to fire; and only the MOLTKE remained in tolerable fighting order. To her Hipper started to transfer his flag soon after 7 p.m., but the DERFFLINGER was for some considerable period left to lead the German battle cruisers without any means of quick signalling.

Had the British closed, had there been an energetic initiative such as Nelson displayed at the battle of St. Vincent, who shall say what victory might not have been accomplished by the British Fleet? But stiff and inflexible, the long British line continued to steam to the south-east by east, while the Germans were steaming off to the south-west. The British commanders were groping in the mist and smoke for the Germans. The difficulty of keeping touch with a powerful enemy, who shot accurately, in such conditions

does not need emphasis. Three British battle cruisers had already gone up and three other British cruisers¹ had been put out of action in the business of maintaining contact. If a decisive battle was to be fought there was only one possible method of bringing it on—for the battleships resolutely to close and carry out the principle of Troubridge: "let the weakest fend off." For now the evening was advancing; only two more hours of daylight remained; and Jellicoe was firmly convinced that the British Fleet ought in no circumstances to risk a night action, because its tactical arrangements for work in the dark were inferior to those of the Germans. Every moment was precious.

At 6.44 Jellicoe ordered his fleet to alter course by divisions to the south-east. He had not yet received information that the Germans were then steaming west; and thus his order would not secure close contact. The *Falmouth* had passed the German battle cruisers within 6,000 yards when they were engaging Hood, and had seen their turn west, but did not report it till Beatty asked where they were, at 6.40. No one else saw them turn, though several German battleships could be made out from the British Battle Fleet to the south-south-west from 6.30 to 6.45,² and at 6.54 Jellicoe altered course to the south.

The 6th German Flotilla, which was with Hipper, had gone out to attack Hood's battle cruisers, and fired five torpedoes at them about 6 p.m. Behind it the 9th came hastening up and fired three torpedoes. Then followed the REGENSBURG, with Commodore Heinrich who, ordering the 2nd Flotilla as it came up to follow him, led it against the *Shark* and *Acasta*. The 3rd arrived soon after and was on its way to attack—indeed it had sighted Hood's squadron—when Michelsen, at 6.39, sent it an order to retire. This was, perhaps, lucky, for about 6.55 the gyro compass in the *Lion* failed and the battle cruisers with Beatty described a circle unintentionally. After this turn the *Indomitable* and *Inflexible* fell in astern of Beatty's four ships.

The 3rd German Flotilla fired several torpedoes at British ships, but a torpedo which at 6.57 struck the British battleship *Marlborough* was most probably fired by the WIESBADEN³ which was still afloat. The *Marlborough* was hit under her fore bridge; the injury was extensive; her Diesel engine and

¹ *Defence*, *Warrior* and *Chester*.

² *Jutland Despatches*, pp. 65, 71, 73, 84, 89, 99.

³ It may possibly have come from V 48.

hydraulic engine rooms were put out of action, and 2 men were instantly killed. She listed 7 degrees to starboard but though the explosion took place at the most unfavourable point for her,¹ she could still steam 17 knots, use her guns, and maintain her position in the line of battle. At 7 Scheer signalled an order to the German destroyers to go to the WIESBADEN and remove her crew, and three boats advanced to carry out that order. At the same time he turned his battleships simultaneously to starboard, for a second time reversing his course. As, according to the German Official History, he was still unaware that the whole Grand Fleet was opposed to him, and did not learn that fact till about 7.32,² he may well have supposed that such a bold manœuvre would surprise the British, throw them into confusion, and enable him to rescue the LÜTZOW and WIESBADEN. His line now steamed east-north-east, headed by the four battle cruisers which were still capable of manœuvring.

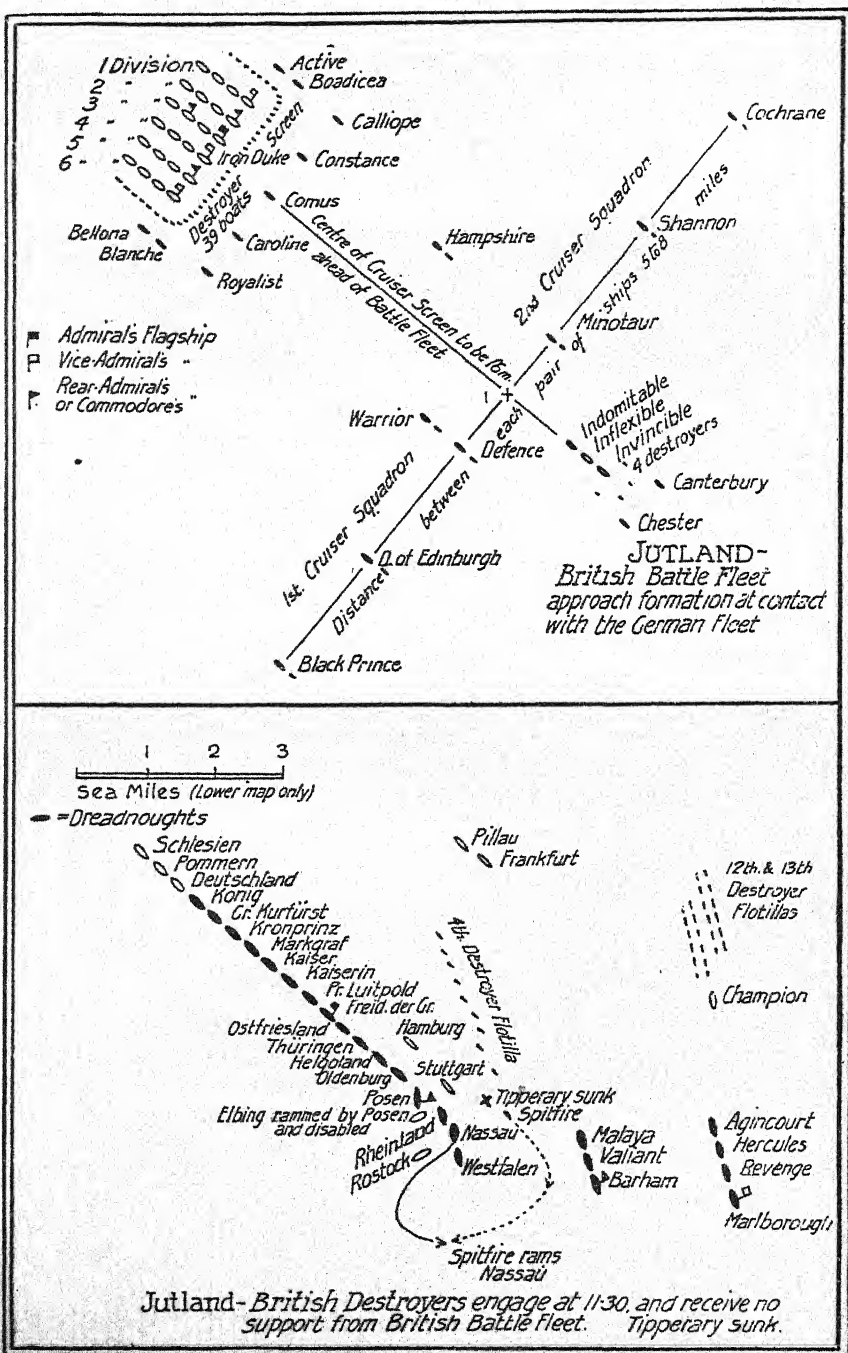
About 7 p.m. the British light cruiser *Southampton*, which had so steadfastly and successfully watched the Germans, reported her position and the fact that she had sighted the German Battle Fleet steaming east-south-east. As the British Battle Fleet was going south, this meant that the Germans were heading straight for the midst of the British Battle Fleet, and that the chance of a decisive engagement once more offered itself. The German battleships opened a heavy fire on the *Southampton* and drove her off; but soon after 7 p.m. German battleships and battle cruisers were seen from the British Battle Fleet which opened on them. Led by the DERFFLINGER, the German battle cruisers were ordered by Scheer to close the British and charge at 7.14, and at a speed of 23 knots advanced towards where they supposed the head of the British line would be found. Actually they headed for the centre of the British line of battleships, while suddenly the visibility altered to their disadvantage as they struck a patch of clear sea. A furious raking fire was concentrated on them.

In quick succession the two stern turrets of the DERFFLINGER were hit by 15-inch shells probably from the *Revenge*³; in each turret a great ammunition fire took place, and in each almost all the turret crews, totalling in the two turrets over 150 men, perished as flames rose high as a house. Dense clouds of smoke penetrated into other parts of the ship. The

¹ Jane's *Fighting Ships*, 1920, p. 50.

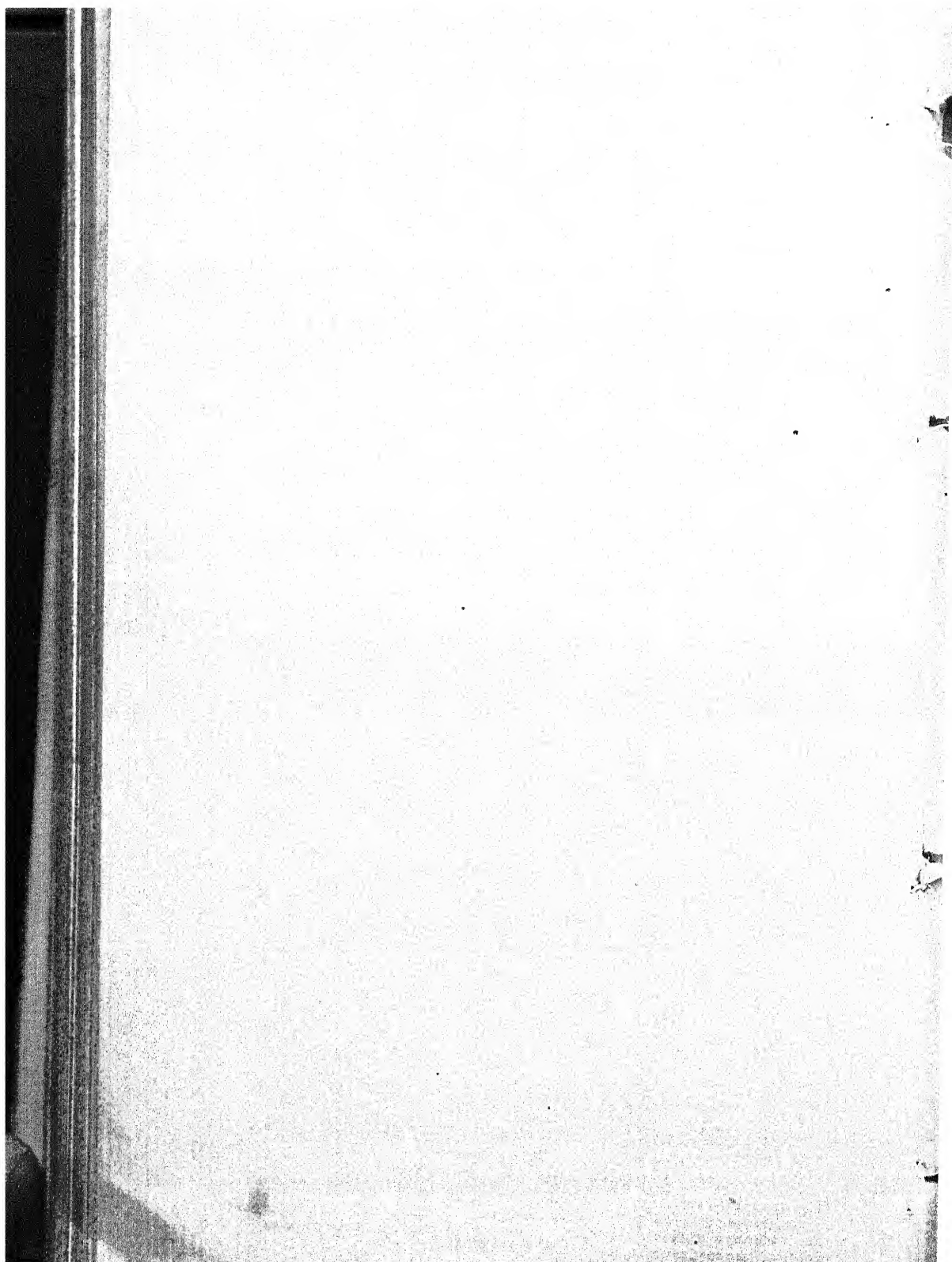
² Nordsee, v, p. 332.

³ *Jutland Despatches*, p. 85.



PLAN 38
JUTLAND VI

The upper diagram shows the formation ordered, but owing to difficulties of visibility, not carried out, by Jellicoe's Fleet for the approach. The screen of destroyers round the battleships is plainly indicated. The lower diagram shows the closeness of the



armoured door of the conning tower was jammed open by a heavy hit, and closed by another hit. Such thick smoke poured from the ship that the British seem to have lost sight of her. With 3,000 tons of water in her and only two of her heavy guns able to fire, she was out of action for the time being. The SEYDLITZ was hit on her after turret and was also badly damaged in her hull. The VON DER TANN was hit by a heavy shell which killed or wounded all in the after conning tower and wrecked the ventilating trunks to the starboard engine room, which it filled with gas and smoke. The sheer weight of the British fire stopped the German charge.

The British were in an extremely favourable position. According to the German Official History, the Germans were unable to see their antagonists and the violence and accuracy of the British fire caused them great uneasiness. But at this crisis the advance of the three German destroyers which were steaming forward to take off the WIESBADEN's crew, led the British ships at the north-west end of the line to turn away. At 7.22 and 7.25 Jellicoe signalled to alter course 4 points (45 deg.) away from the Germans, as other German destroyers had been made out steaming towards the British, and it was concluded that in accordance with their usual tactics, a mass torpedo attack was about to be delivered by the Germans.

About this time the German line was in disorder, "bunched up," and unable to fire at the British. The KÖNIG was heavily hit astern of the third turret; the GROSSER KURFÜRST in two minutes was struck by no fewer than four big shells, one of them 15-inch; the HELGOLAND had a large fragment of armour 18 inches in diameter driven inboard. At 7.18 Scheer signalled to his hard-pressed ships to turn once more simultaneously, thus for the third time executing a manœuvre which Jellicoe had rejected as impracticable in the presence of an enemy.¹ Recognising the extreme peril of the German position, the battleship KÖNIG laid a heavy smoke screen between the British and the German line. Beatty, however, was, again, in contact with the German van and hit the MARKGRAF and KAISER, without inflicting on them grave damage.

The German destroyer attacks covered this retirement of the High Sea Fleet and enabled it to fall back westwards. Numerous torpedoes were discharged at the British battleships

but all were avoided and there were no casualties. The Germans fired at too distant a range, but though they came under the Battle Fleet's big guns and several of them were hit, only S 35 was sunk, struck amidships by a heavy projectile. The three destroyers which had gone to rescue the WIESBADEN's crew fell back under the fire without having been able to effect their purpose. British destroyers of the 11th Flotilla advanced to meet the German boats about 7.26 and drove the last remnant back. But the onslaught had served its tactical purpose; before 7.30 the German heavy ships had vanished in the smoke from the gun layers of the British Battle Fleet.

Scheer's position was still serious enough. At 7.32 he learnt from his 18th Destroyer Half-Flotilla that British heavy ships were south-east of him as well as north-east, and this news told him at last that the whole Grand Fleet was upon him. He concluded that the British plan was to force him westwards, attack him at night with destroyers, and thus drive him still further west, so that next morning in daylight the British could engage him with their whole strength concentrated in a second battle. It was a situation which would have terrified a weak leader, but Scheer's great quality was that he did not allow himself to be intimidated by visions of what might happen to his own fleet. He took the boldest course.

At 7.40 the *Lion* reported the Germans ten to eleven miles north-west by west of her, whereupon Jellicoe altered course to south-west to place his fleet between the High Sea Fleet and its bases and made the recall signal to his destroyers. Some minutes earlier he had directed the 4th Light Cruiser Squadron which was chasing the German destroyers westwards, not to go too near the German Battle Fleet. There could not, then, have been much doubt where that fleet was, though at 7.45 the *Southampton*, at the north extremity of the British front, signalled that at 7.15 the enemy had "detached unknown number of ships, type unknown, which are steering north-west." This was unquestionably to be explained by the fact that she had seen the third German simultaneous turn, made by the Battle Fleet under cover of Hipper's battle cruisers, which would appear much as the movement she described. At 7.44, moreover, Beatty at the southern extremity of the British front, once more reported the position and course of the German Fleet with the object of getting the British line turned more to the west so as to close Scheer.

At 7.45 Beatty signalled by wireless to Jellicoe: "Urgent. Submit van of battleships follow battle cruisers. We can then cut off whole of enemy's battle fleet." The signal was not answered until 8.14 when Jellicoe ordered the 2nd Battle Squadron to follow the battle cruisers. It had not done so of its own initiative, as it might have been expected to do, and at 8.14 the battle cruisers had vanished in the evening mist. Yet once more a great chance offered. The Germans had formed up in three lines, the battle cruisers to the east, nearest the British, the sixteen Dreadnought battleships in the centre, and the six old battleships to the west, in advance of the other two lines, and were now steaming south-wards. They were, therefore, rapidly approaching the British battle cruisers which were coming down from the east, with the 3rd Light Cruiser Squadron spread as a screen in advance. At 8.19 the *Falmouth*, flagship of the Squadron, reported sighting a Zeppelin. This may have been L 14, which flew over the stretch of water where the two fleets were engaged and reported seeing nothing and hearing nothing—a strange example of the uncertainty of air reconnaissance. The *Hercules* also reported sighting a Zeppelin in this stage of the battle.

The British light cruisers struck Scheer's cruiser force at 8.17, while about the same time the 4th Light Cruiser Squadron (which might have maintained continuous contact with the Germans had it not been called off) came upon a number of German destroyers and drove them before it. In the pursuit the *Calliope* suddenly sighted three German Dreadnoughts in the mist at 8.26, and was hit five times and somewhat badly damaged with a loss of nineteen men before she could retreat. She fired one torpedo at 6,500 yards against the leading German battleship of the KAISER class, but missed.

Meanwhile Beatty had once more come into action with the German battle cruisers and, if he had had battleships close up to him and supporting him, there was at least a possibility of completely destroying these dangerous vessels. Of the forty-eight heavy guns in Beatty's six ships eight were out of action leaving forty effective. In the German ships a great deal had been done to get disabled turrets back into working order, but they cannot have disposed of more than sixteen or eighteen of their thirty-six heavy guns. Moreover the *DERFFLINGER* and *SEYDLITZ* were so badly damaged that they were deep down in the water. The attack of the British took

the Germans entirely by surprise. The SEYDLITZ and DERFFLINGER were repeatedly hit, they sustained much further damage, and retreated as fast as they could astern of the old German battleships, which now faced the British battle cruisers, supported to some extent by the fire of the German Dreadnought battleships, well astern of them.

The old German ships in a short interchange of fire suffered so much damage that they retired. No assistance was given to the battle cruisers during this brief encounter by the British battleships. It was now growing dark—visible sunset took place at 8.19, but in that high latitude night did not come on till about 9. Owing to the distance of the battleships of the 2nd Battle Squadron from the battle cruisers not only did that squadron fail to intervene in the fight, but it even clogged the action of the British light cruisers and destroyers. At 9.5 p.m. the *Caroline* in the 4th Light Cruiser Squadron reported old German battleships 8,000 yards off to the 2nd Battle Squadron, fired two torpedoes at them and signalled to the destroyers to attack them. At 9.6 the negative was made to her from the *King George V*, on the ground that the ships were British, and though this was almost at once recalled an opportunity was lost. The German ships were almost certainly Hipper's battle cruisers. No doubt the dreadful consequences which might follow a mistake weighed heavily with the British leaders, but the British light cruisers were well commanded, and the interference with them was most unfortunate, coming after the failure to close in promptly,¹ when Beatty made his appeal. An attack on Hipper's battered ships by the intact and powerful 2nd Battle Squadron should have given immediate results. Owing to the failure of the British Battle Fleet to open fire and close, the British destroyer commander, Commodore J. R. P. Hawksley in the *Castor*, decided not to attack, as it was not dark enough to do so without support from the fire of the fleet.² At the northern end of the British line German destroyers in weak force attacked the 5th Battle Squadron about 9 and were beaten off without any particular difficulty.

¹ Cf. the earlier recall given about 7.40 to the *Castor* as she was preparing with the destroyers to attack. (Fawcett and Hooper [First Edition] p. 202). This order came from Jellicoe.

² *Jutland Despatches*, p. 303.

CHAPTER XXV

** German Fleet's Peril—British Decision not to Fight a Night Battle—Defensive Orders to the British Destroyers—"Frauenlob" Sunk—German Battleships Strike British Destroyers—Violent Actions—Destruction of the "Black Prince"—British Destroyers Handicapped—Germans Pass Behind British—British Main Fleet Does not Engage Them—"Lützow" Sunk by her Crew—Last Contact with the Germans—They Escape—Experiences in the "Lion"—In the "Princess Royal"—Heroism of the "Queen Mary's" Crew—In the "Tiger"—The "Invincible's" End—The "Warrior's" Last Hours—The "Malaya's" Great Fire.*

THE British Fleet turned south, at 9.01, and took up its formation for the night, drawing in its battleship divisions to intervals of one mile so as to maintain close contact. The British were still to the east of the Germans, with the battle cruisers south-west of the Battle Fleet and the destroyers astern. They were in such a position as to prevent the German Fleet from reaching the swept channels through the minefields of the Bight, to its bases. There were three such channels. Two debouched on open water to the south of Horns Reef, and were both covered by the British Fleet. The third was far away and was carried along the north coast of Holland, so that the probabilities were against it being used. There remained the Skager Rack and the Little Belt, but a fleet hampered by slow battleships of the DEUTSCHLAND class was not likely to attempt that route and, if it did, it could be followed and overtaken by the British Fleet. The channels through the Bight were roughly known to the Admiralty and to the command in the fleet. Eighty mines were to be laid in the westernmost of the two channels near Horns Reef, twenty-five miles south of that light vessel, by the fast

British minelayer *Abdiel* that night. Three British submarines had further been ordered to station themselves near this channel, and would be ready to attack the German Fleet, if it retired that way. The British mines were still of too weak type to make much impression on the German Dreadnoughts.

All these arrangements for trapping the German Fleet ultimately depended on readiness to fight it, if it attempted to break back past the British Battle Fleet. But that readiness to fight it did not exist. Jellicoe stated after the battle that the organisation of the Germans at night was very good, their system of recognition signals excellent (whereas the British system was "nil"), their searchlights superior, and their method of night firing most effective. He adds that he, from the first, rejected the idea of a night action between heavy ships "as leading to possible disaster owing first to the presence of torpedo craft in such large numbers, and, secondly, to the impossibility of distinguishing between our own and enemy vessels. Further the result of a night action under modern conditions must always be very largely a matter of chance." The German Fleet had, therefore, only to steam boldly at the British to be certain of getting past the heavy ships.

If one of the leaders of two opposed fleets decides in no circumstances to fight a night battle, he is obviously at a disadvantage. The leader who is quite ready to take big risks has only to wait for darkness, if he is cornered, and he will be able to escape, even though he is in inferior force. How the deficiencies in the British Fleet which Jellicoe has mentioned arose, and why they were permitted to continue two years after war began, is a problem on which no light is shed by the published documents. Certainly the German system of night firing was immensely superior to the British. Immediately a hostile ship was seen, the guns and searchlights could be turned simultaneously on to it by an observer in the control station. It is quite possible that the lamentable destruction of the *Black Prince* was due in part to this cause.

Beatty's opinion has been cited as unfavourable to a night battle and on general grounds most leaders would avoid such an action. But it will be observed that in his report he gives as his first three reasons for not engaging about 8.40 that his battle cruisers were at a distance from the Battle Fleet, that they were damaged (three of them had been heavily hit), and

¹ *Nordsee*, iii, p. 283; v, pp. 534, 367.

that the Germans were concentrated. There is no verdict here unfavourable to night action against an enemy who may escape, when your own fleet is concentrated and not hampered by serious injuries sustained in the daylight fighting. The report contains only a commonsense ruling against attacking a powerful adversary with ships of weaker force (for the battle cruiser is at least twenty per cent. weaker in gun power and thirty per cent. weaker in protection than a battleship of the same size and class) in a close action where artillery power and protection will be the decisive factors.

That ruling applies to day as well as night actions, unless some great tactical advantage against the adversary can be obtained, such as concentrating on his van or rear by crossing the T. The superior torpedo armament of the Germans has been mentioned as another reason for avoiding a night action, but the British had more torpedo craft and more torpedoes available, if the British heavy ships generally carried a weaker torpedo armament than their German opposite numbers. German submarines were thought to be present in some number by the British leaders; they are mentioned again and again in the British reports, but submarines at night could not distinguish between friend and foe and would have little scope for action. The daylight fighting had certainly not redounded to the credit of the torpedo. The British command could not know that the SEYDLITZ was still with Scheer despite her torpedo injury, but it did know that the damaged *Marlborough* was still steaming at 17 knots. Of mines there was no trace; nor was it antecedently probable that the Germans would lay them in waters where they themselves were manœuvring and from ships fighting under a heavy fire.

The orders issued to the British destroyers were purely defensive. They were directed at 9.27 to take station five miles astern of the battle fleet; they were not ordered to attack the Germans, nor were they given any information as to the German Fleet's position, or the general situation, or even ordered to keep touch with the German Fleet. This signal was picked up by the German wireless station at Neumünster, but the deciphering of it took longer than did the reading of similar German messages in the British Admiralty, so that, contrary to the general British belief, the information did not reach Scheer in time for him to use it. Such at least is the statement of the German Official

History,¹ which also asserts that he had no idea that he was going to steam into the midst of the British destroyers. In any case he took the boldest possible course and decided to steer direct for Horns Reef, trusting to the powerful fire of his battleships to beat off torpedo attack.

Believing that the best defence is a vigorous offensive, he ordered his own destroyer flotillas to attack the British during the night. This order was intercepted by the British wireless and transmitted by the Admiralty to Jellicoe. But an order given by Scheer at 9.6 to the German aircraft for early reconnaissance off Horns Reef next morning,² was unfortunately not received by Jellicoe. It is not in the *Jutland Despatches*. It would have told the Grand Fleet command definitely where the German Fleet was likely to be found next morning.

The German Official History indeed assumes that when Jellicoe broke off the battle in daylight, he did so with the secret intention of not again closing with the German heavy ships. For that assumption, however, there is little foundation, and had he given his fleet a rendezvous for Horns Reef and vigorously attacked there at dawn, it is morally certain that a great victory would have been achieved, even after all the opportunities of May 31 had been allowed to pass. The theory of some critics, that the German Fleet would have won in a close and determined action, has little in its favour. There is no example in history of a fleet manned by well trained men with a superiority such as the British possessed, being defeated by the weaker antagonist.

Scheer marshalled his battleships in one long line, headed by the WESTFALEN, and placed the old pre-Dreadnoughts in the rear of his formation about 10 p.m. He stationed the crippled DERFFLINGER and the VON DER TANN, which was able to fight only about half her guns, near the rear of his line, the last ship being the light cruiser REGENSBURG. In this array he passed astern of Jellicoe's Battle Fleet and close to the 5th Battle Squadron which was considerably astern of station. His available light cruisers supported by the SEYDLITZ (which was of little or no use for fighting and apparently *in extremis*) and the MOLTKE, the only one of the German battle cruisers in good fighting order, felt for the British, covered by two and a half destroyer flotillas. His course was approximately known to Jellicoe; an Admiralty message, based on the German wireless signals,

¹ Nordsee, v, pp. 367, 387-8.

² Nordsee, v, p. 533.

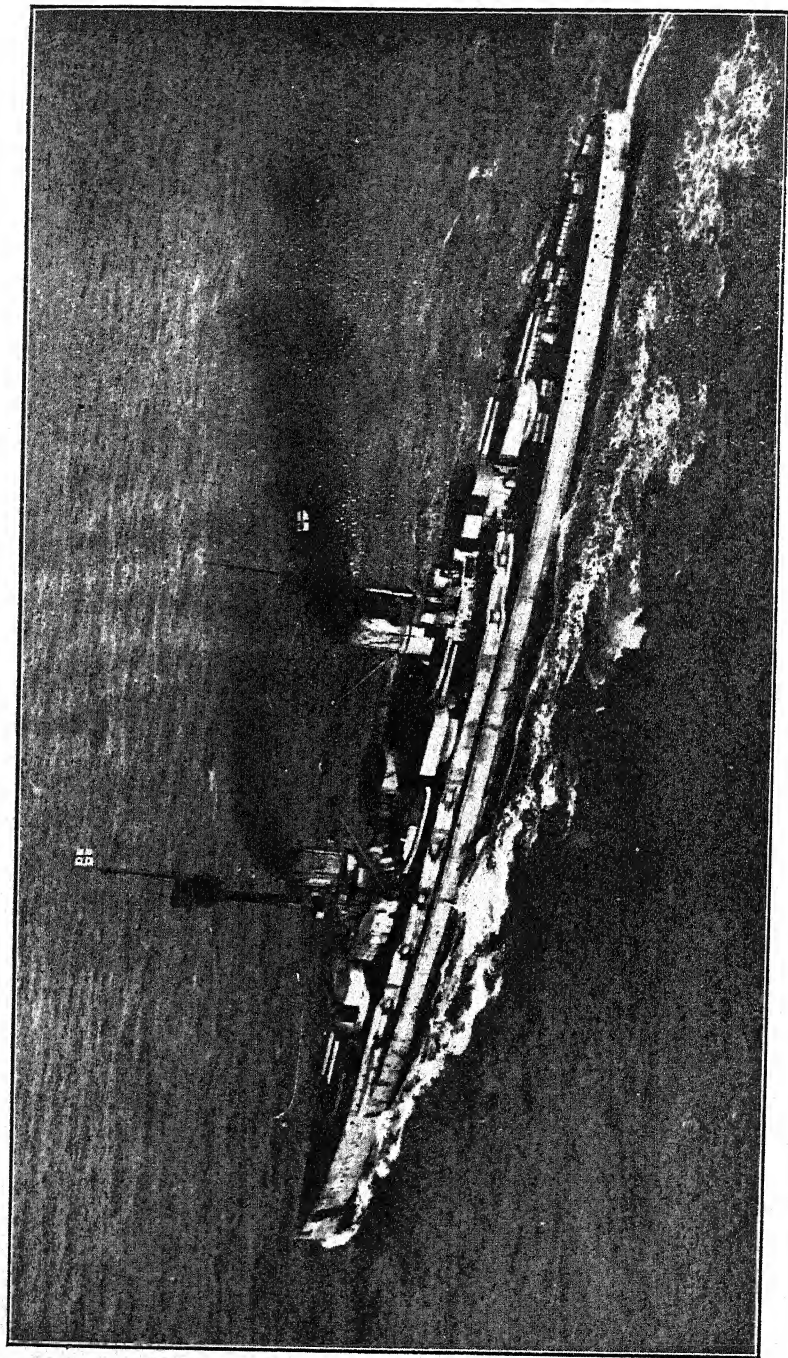
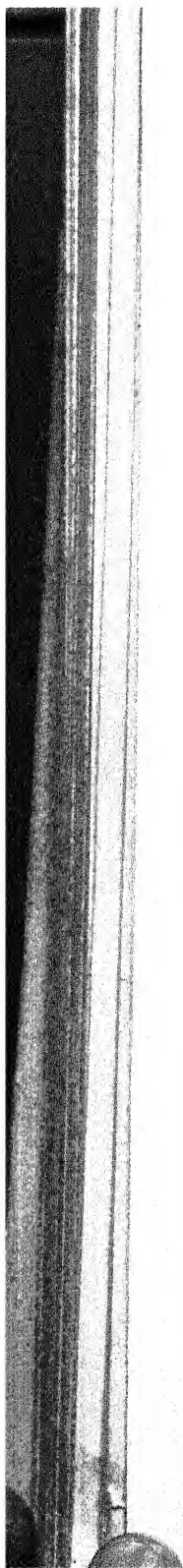


PLATE 36

The German flagship, *Friedrich der Grosse*, leading the line of German battleships at the surrender of the German Fleet on Nov. 21, 1918, at Rosyth. She flew Rear-Adm. von Reuter's flag. The photograph is taken from the air and shows very clearly the arrangement of turrets in the German Dreadnoughts of her class. She fought at Jutland, where she carried Schreer's flag.



informed the British commander in chief at 10.41¹ that the German Fleet was "believed to be returning to its base as its course was south-south-east $\frac{3}{4}$ east, and speed 16 knots." An earlier Admiralty message sent off at 9.58 gave what was thought to be the exact position of the German rear ship, based on an intercepted signal made by the REGENSBURG.² Unfortunately for the British the German cruiser had made a mistake of ten miles in calculating her position, and the Admiralty consequently reported the German Fleet at least ten miles too far to the south. Jellicoe knew it was not there, for if it had been he would have been in contact with it, and the message must therefore have puzzled the Grand Fleet Staff. But any real doubt as to the whereabouts of Scheer should have been removed by the noise and flash of fighting noted soon after 10 by various battleships.

About 10 the cruiser *Castor* and the 11th Flotilla (fifteen destroyers) struck the German 4th Scouting Group and fought a sharp action with the hostile cruisers. Many opportunities of using the torpedo were lost because the British destroyers were ignorant of the German whereabouts and took the approaching vessels for friends thus deliberately refraining from discharging torpedoes³ and losing good opportunities. The HAMBURG was hit several times and the *Castor* had 36 casualties. Just at this moment the *Southampton* and *Dublin* suddenly made out five German light cruisers which turned on their searchlights and poured a most violent fire into the two British vessels. These had also brought their searchlights into play. In three and a half minutes the *Southampton* sustained 89 casualties and lost seventy-five per cent. of those on her upper deck. Pillars of flame rose from her hull, and then sank again just as all near thought she was about to blow up.

She retired in grievously damaged condition but still able to steam at 20 knots and float. The *Dublin* was also set on fire and severely hit. The *Nottingham* and *Birmingham* in the same squadron did not turn on their searchlights and were able to fire with better effect and without casualties. A torpedo discharged by the *Southampton* struck the old German cruiser FRAUENLOB, which in flames from the British fire went down with her captain and 319 officers and

¹ Allowing for deciphering, this signal must have reached Jellicoe between 11 and 11.15 p.m.

² *Nordsee*, v, p. 382.

³ *Jutland Despatches*, p. 304. The *Castor's* wireless was put out of action temporarily by the German fire and thus she could not signal orders to the destroyers.

men, fighting to the last. The flashes of the guns and the flames from the fires in the *Southampton* were seen from many of the British battleships, but it was apparently taken as a matter of course that the light craft should fight out their engagement by themselves. The columns of British battleships steamed steadily south, even after the commodore of the British destroyer flotillas reported at 10.50 that he had been engaged by enemy cruisers (which were ships of superior class). On the British destroyers presently broke the full strength of the German Fleet; without orders (for they had none other than those to screen the fleet) they were caught at a disadvantage. It is to the honour of officers and men that they put up so gallant and determined a fight. -Not knowing where the Germans were and having no idea of the situation, they could not be certain whether ships approaching them were enemies or friends.

About 11.10 strange ships were sighted from the 4th Flotilla (twelve destroyers strong) but they were at first taken for British. They were coming up astern, steering a converging course. Other German vessels had been previously sighted dimly in the darkness—for the opposed fleets steamed without lights and were reluctant to bring their searchlights into play. At 11.30 the strange ships were so close that the *Tipperary* made the challenging signal whereupon "hell broke loose." Hostile searchlights flared out and a storm of shells struck her and the other British destroyers. If only they had known the position of the Germans, if only they had been in a state of readiness to use any favourable opportunity to attack, they were in a position to strike with effect at the main German Battleship Force. The ships which had fallen on them were the WESTFALEN, NASSAU and RHEINLAND, at the head of the German line, with, close to them, the light cruisers ROSTOCK, STUTTGART, ELBING and HAMBURG. The British destroyers of the flotilla fired numerous torpedoes at the closest range. There was a furious *mêlée*.

The *Tipperary* was disabled at the very outset and began to sink. The *Spitfire* not only discharged two torpedoes at the Germans, but attacked the NASSAU at point blank range, and killed the captain and ten men in that ship. Finally the NASSAU rammed her small antagonist, blowing away the *Spitfire's* forward funnel and bridge with the blast from the heavy guns, but suffering in return extensive water-line injuries which lowered her speed to 15 knots. The POSEN

rammed the *ELBING* in the frantic confusion of the mix-up and damaged her so severely that she was no longer able to manœuvre. The *Broke* rammed the *Sparrowhawk*, having been crippled in her steering gear by the German fire and the *Contest* also collided with the *Sparrowhawk*. The *Rostock* was struck by two torpedoes and all but collided with the German battleships, from injury to her steering gear.

The head of the German line was in a state of disorganisation, offering immense opportunities to a bold attack by the whole destroyer force or a large part of it. No order, however, came to attack. The neighbouring flotillas did not close in to the support of the 4th. What is, perhaps, most surprising is that only three or four miles away with all the uproar of firing, glare of searchlights and brilliant flashes of the guns in plain view, the 5th Battle Squadron continued its course southward, away from the action that was raging astern of it. The fighting was equally visible from the 6th Division of the 1st Battle Squadron but that division also gave no support. Presumably strict orders had been issued that the British battleships were not to engage in a night battle. Yet in at least one of these ships the right deduction as to the meaning of the uproar was drawn. Captain Schoultz in the *Hercules* states he wrote down late in the night "that the enemy had crossed our course from the starboard to the port side."¹

Driven back temporarily by the 4th Flotilla, the German line once more steered to cross the rear of the British fleet. Two German light cruisers, *PILLAU* and *FRANKFURT*, during the encounter with the 4th Flotilla became separated from Scheer's main force, and they, or perhaps the *SEYDLITZ* and *LÜTZOW*, which were near together to the north-east, may have been the vessels reported by the *Birmingham* at 11.30 in a message to Jellicoe: "Battle cruisers unknown number probably hostile in sight, north-east course south." The position and course thus given were at variance with the Admiralty reports and must therefore have embarrassed the Grand Fleet command. These contradictions and discrepancies show the importance of notifying to a commander such definite information as the German order to scout off Horns Reef, where mistakes arising from ship's calculations of position in terms of longitude and latitude are eliminated. Jellicoe was, apparently, not given any information of this sort from Whitehall. Once more, however, the actual evidence of fighting was there to indicate where the German

¹ Schoultz, p. 148.

Fleet was. About midnight the German line yet again struck the 4th Flotilla, as Scheer steered east to cross the British rear. The six destroyers of that flotilla (four had become detached) again engaged most gallantly and inflicted considerable damage with their 4-inch guns on the German battleships. The action was a cruelly unequal one; the *Fortune* and *Ardent* were both sunk with heavy loss by the crushing fire which was concentrated on them, though once more they forced the German line to turn away.

Just as the four remaining destroyers of the Flotilla had fallen back, the *Black Prince* approached the German line, evidently mistaking it for British. Between 12.5 and 12.15 a.m. of June 1, at a range of 1,100 yards, the THÜRINGEN, OSTFRIESLAND, NASSAU and FRIEDRICH DER GROSSE opened on her an appalling fire; some ten heavy shells fired by the THÜRINGEN struck her at the closest range in the first minute. Flames rose from her shattered hull high as the masthead and lighted up the work of destruction. Not a shot could she fire in reply. A roaring furnace, she drifted along the German line with explosion following explosion, till there came a fearful detonation and a column of fire rose to an enormous height in which she and all her crew perished. The *Black Prince* had lost touch with the British Fleet and followed far to the rear. But the glare of the explosion was clearly seen in many ships in the British Battle Fleet. The *Malaya* about midnight saw in the flash of an explosion the leading ship of the German line which she correctly identified as one of the WESTFALEN class. She failed to transmit that important information to Jellicoe. After a turn away, the German line once more felt for the British rear, and must have passed astern of it about 12.30.

The "overs" from the heavy fire which the German ships had concentrated on the 4th Flotilla, had to some extent affected the other British flotillas. These had not been directed in one great concerted movement, against the German line; they had received no such order to attack as Scheer gave his own torpedo craft; and they were consequently condemned to a passive attitude, failing some bold initiative, until the Germans were actually upon them. The German Official History comments on the courage of the British destroyer leaders and crews, but condemns the want of skill shown in using their arm and their isolated and disconnected attacks. That want of skill, however, arose simply from the fact, which has already been pointed out,

that they were left without proper leadership, and were told off for a defensive part.¹ To some extent the flotillas may have suffered from their constant employment for defensive duties and incessant arduous work at sea, which must have interfered with their tactical training. The German flotillas were not subject to the same disadvantages.² So it was that they did not strike in concert or with proper support from heavier ships, without which all the experience of war suggests that surface torpedo craft can accomplish little, especially if they are armed with such torpedoes as the British destroyers of that period carried, with an inadequate range.³

About 12.40 the *Petard* was severely hit and the *Turbulent* was sunk by the German battleships at the head of Scheer's line, which they had mistaken for British vessels, and the German van was at last east of the British, and within sight of safety. The British Battle Fleet, undisturbed, continued its course to the south, apparently treating the destroyer fighting as of minor importance. In the *Superb* between 10.13 and 12.25 the firing behind the fleet was observed to pass right across the rear of the fleet, from starboard to port quarter. Jellicoe states that it was his intention, when during the night he headed south, to close Horns Reef at daylight (which would be shortly before 3 a.m.) of June 1. To reach it at that hour his fleet should have turned east between midnight and 1 a.m.,⁴ and if a night action was at all costs to be avoided by the Battle Fleet, have steered to the south of the engagement proceeding in his rear, on a course towards the Reef. No such movement was made nor was any order issued for the Battle Fleet to concentrate as a preliminary, till it was too late.

At 1.56 of June 1 the 12th Flotilla sighted the German Battle Fleet north-east of the British Fleet, but its wireless signals to Jellicoe never got through, probably because of jamming. At 1.48 the Admiralty reported from an intercepted message that a damaged German ship, probably the *Lützow*, was at midnight at 56 deg. 26 north Lat., 5 deg. 41 east Long., almost exactly the same position as that in

¹ See also Commander R. B. C. Hutchinson's (of the *Achates*, 4th Flotilla) appeal "that in future the maximum amount of information may be given to destroyers as to the disposition of our own forces, observing the difficulty of recognition by night." *Julland Despatches*, p. 309. The loss of the *Tipperary* seems to have been due mainly to the complete ignorance in which the destroyers were left. *Julland Despatches*, p. 327.

² Cf. Schoultz, pp. 235-6, and also Sir R. Bacon, *Dover Patrol*, ii, pp. 333-4.

³ So the Germans state in their official history on the basis of actual observations.

⁴ See Map No. 35 in *Nordsee*, v. At midnight the British flagship was forty-three miles from Horns Reef Light. Fleet speed was seventeen knots and at that speed over two and a half hours would be required to reach the Light.

which the *Birmingham* had reported "battle cruisers probably hostile" at 11.30. These two messages seemingly led Jellicoe to conclude that the Germans were still to the north-west of him and to decide to continue his course to the south-east, though now with each mile that he steamed south he was uncovering the entrances to the swept channels near Horns Reef. At 2 a.m. Admiral Burney, commanding the 1st Battle Squadron, transferred his flag to the *Revenge* from the *Marlborough*, which ship's speed had fallen owing to her injuries, and she was sent off to the Humber—a pretty clear indication that the German Main Fleet was considered not to be to the west of the British as, if it had been, the *Marlborough* would have run great risk.

The 12th Flotilla (fifteen destroyers) after sighting the German Fleet shortly before 2 a.m. prepared to attack, whereupon the German battleships, which were led by the MARKGRAF, turned away to the south-west, and were thus once more forced off their course by the British destroyers. The British kept touch and between 2.10 and 2.20 delivered a most determined attack, firing twelve torpedoes. One or more hit the POMMERN, an old battleship in the German line. Immediately after the column of water and smoke which shot up beside her followed a series of explosions on board till one sea of flame broke from her and rose to a great height. The whole centre of the ship was blown into the air and she sank in two halves with every soul in her.

British torpedoes narrowly missed at least three of the German Dreadnoughts, and the German line was again thrown into disorder. The destroyers vanished in dense clouds of smoke but they, too, had suffered in this furious assault; the *Onslaught*, one of the boats which had particularly distinguished herself, had her bridge wrecked and her captain and first lieutenant killed or mortally wounded. At 2.15 one of the British torpedoes must have hit the German destroyer V 4, as there was a great explosion in her amidships, at that time attributed by the Germans to a mine or British submarine attack, and she sank at once with 17 dead. A little later boats of the 13th Flotilla sighted German ships, and a torpedo was fired which narrowly missed the DERFFLINGER. But the Germans had now passed east not only of the British Battle Fleet but of the British destroyer flotillas; and the course of the British Main Fleet was still persistently south.

At 1.45 a.m. of June 1 the Lützow was sunk by her own crew, 60 miles north-west of Horns Reef. She had 8,000



ADMIRAL ARBUTHNOT

He commanded the 1st Cruiser Squadron at Jutland and covered Jellicoe's deployment, completely driving in the German cruisers before he perished in the *Defence*, at the Admiral's post of honour and danger.



ADMIRAL HOOD

Commanded the 3rd Battle Cruiser Squadron at Jutland, in which he perished leading his squadron with splendid dash. He was posthumously knighted for his noble services.



ADMIRAL KEYES

Distinguished in the battle of Heligoland and in command of the operations which blocked Zeebrugge.

PLATE 38. p. 170.



ADMIRAL SIMS

He was in charge of the United States Navy in Europe and won the respect and affection of all Englishmen who came into contact with him.



1916]

END OF THE "LÜTZOW"

tons of water in her and was helpless. All on board were removed to the four destroyers which had been escorting her in the night, and then two torpedoes were fired at the wreck, which sank her. Even the WIESBADEN, after all the battering she had received, remained afloat till daylight, when she foundered, leaving only one survivor, a stoker, who knew little of the battle. The ELBING sank about 1 a.m., but did not go down till her crew exploded charges in her. A German party which carried out this duty was rescued in a cutter by a Dutch vessel, after the ELBING's commander had shown a powerful light to attract the attention of British vessels to a large number of the *Tipperary's* crew who were in the water near him. This was a chivalrous act as it meant considerable risk to himself. The rest of the ELBING's crew had been taken off in a destroyer. The ROSTOCK did not sink till 4.25, after two torpedoes had been fired into her. The German warships certainly showed in this battle extraordinary resistance and power of floating.

At 2.22 Jellicoe ordered his squadrons to close, and at 2.30 he turned. He was at that time about twenty-six miles to the south-west of the German Fleet and thirty-eight miles from Horns Reef. He did not approach Horns Reef, but simply reversed his course, steaming north-west instead of south-east. He had intended to close Horns Reef, but had abandoned his intention during the night, as he states, because of the events of the night actions and because of the scattered state of his fleet. The battle cruisers during the night were to the west of the Battle Fleet and heard and saw nothing of the Germans. Beatty's task had been to prevent the Germans from slipping to the south-west of the fleet and thus reaching the swept channels through the minefields. The *Birmingham's* report at 11.30 of German battle cruisers sighted to the north-east was taken in by the *Lion*, "sighted to the west-south-west," which suggested that Hipper's ships were near the battle cruisers.

Zeppelins were sighted about daybreak, and L 11 and L 17 were fired at by various British ships without result. Nowhere could any sign be detected of the German Fleet or of the numerous shattered ships which were supposed to have fallen out of its squadrons. At 3.29 Jellicoe received a staggering message from the Admiralty. The German Fleet had been at 2.30 at a point only 17 miles from Horns Reef, steaming south-east by south at 16 knots. If he had carried out his original intention of closing Horns Reef he would have

struck it, whereas now it had eluded him, nor was there any prospect of overtaking it. The last report of contact with the Germans was made by the light cruisers *Dublin* at 4.31, and from the position given the German vessels seen were probably the light cruiser *Rostock* and the destroyers *V 71* and *V 73*, which were standing by the *Rostock* just before she was abandoned.¹

The German Fleet at 3 a.m. was fourteen miles south-east of Horns Reef Light, astounded at the entire absence of the British Fleet, and, if Hase is a safe guide, extraordinarily relieved to discover that it had escaped. The three British submarines near Horns Reef saw nothing of the Germans; the minefield which the *Abdiel* had laid in the night was not touched by the Germans, but an earlier field which she had laid inflicted considerable damage on the *OSTFRIESLAND*, which ran on one of the mines at 5.20. Even the *SEYDLITZ* with forecastle under water, drawing 43 feet, was got into port, though twice she ran aground.

As for the experiences of individual ships which were severely engaged, in the *Lion* a considerable part of the top of Q turret was blown clean off by the heavy German shell, which caused the bad fire in that turret and all but destroyed the flagship of the Battle Cruiser Force. The turret top fell on the deck just beside the turret with a metallic crash, which was heard above all the uproar of battle.² A shell which exploded on the mess deck in the canteen flat caused a large number of casualties. About 4.40 p.m. in the afternoon, when the fire was raging in Q turret, the ship was badly on fire in several places and had a particularly dangerous cordite fire in her 4-inch starboard battery, so that from other battle cruisers in the engagement it looked as though she was doomed.

The difficulty of dealing with the fires was great owing to the fire mains and hoses being so constantly perforated by splinters of shells; it was even feared that X magazine (for the sternmost turret) was alight but this, fortunately for the ship, happened not to be the case. A heavy projectile, bursting in the sick bay where it killed and wounded many, caused dense clouds of smoke which penetrated to the neigh-

¹ *Nordsee*, v, p. 419.

² Personal information. A sick-berth attendant who went into the turret after the explosion survived. He found all the men in the turret dead and he went into the Silent Cabinet to aid the officers there, when the great cordite fire took place. He was afterwards rescued by the fire party, unconscious and badly burnt. Of what had happened he knew nothing.

bourhood of the magazine and led to the belief that it was on fire.¹

The sights and sounds in the *Lion* were unnerving to the ship's company as her captain records,² and the heavy casualties imposed a tremendous strain on the strongest discipline. Yet, he states, "there was never the least sign of wavering in the least degree from their duty. On visiting the mess deck twice during the action while the ship was temporarily disengaged, I observed nothing but cheerful determination, zeal to succour the wounded, and thoughtfulness for the good safety of the ship to keep her efficient. . . . The conduct of the officers and ship's company was in every detail magnificent." Well did a great Englishman say that not pleasure, but suffering and death in a noble cause are the lures which draw true hearts.

The state of the ship during and after the battle was indescribable. The sheets of water which came on board her when the German salvoes dropped close to her, the streams pouring from the fire hoses, and the inrush from the sea through her injuries, left her decks awash, so that the wounded could not be placed on them without grave risk of their being drowned. Everywhere were fires, dense choking smoke, steel splinters and torn plates with edges so sharp that they cut like razors. The impact of the heavy German projectiles made the very structure tremble as though it had been struck by gigantic sledge hammers. Below the armour deck in the stokeholds and engine rooms there was relative safety from wounds and death by the German fire, but there was always the prospect of a sudden end from the sinking of the ship.

Beatty and a little group of officers, forming his personal staff,³ directed the battle from the high upper bridge, just below the fore top. They were quite in the open, unprotected from the smallest splinter, while about them whizzed fragments of the German shells which burst and huge masses of steel hurled from the *Lion's* bows by the German fire. A great fragment of a capstan went past, turning over and over in the air, and there were constant narrow escapes. The proper position of an admiral in battle has been the subject of no little controversy. In the battle of the Dogger Bank

¹ One of the medical staff was killed by concussion ; his body showed no wounds, but such cases were very rare indeed.

² *Jutland Despatches*, p. 146. Report of Captain A. E. M. Chatfield.

³ They were his Chief of Staff, Captain R. W. Bentinck, his Flag-Commander, the Hon. R. A. R. Plunkett, his Secretary, Paymaster-Captain F. T. Spickernell, his Flag-Lieutenant, R. F. Seymour, and various aides and assistants.

Beatty for some minutes tried the conning tower of the *Lion*, but found it unsatisfactory owing to the inadequate view it afforded and its crowded condition. He therefore went back to the upper bridge where the view was good if the danger was great, and this station he maintained throughout the battle of Jutland.

He always appeared entirely insensible to danger and even to think more quickly in it—a faculty extraordinarily rare in even the greatest of fighting men. For in his case this insensibility to peril was no banal figure of speech, but real.

In the German Fleet it is believed that the command was carried on from armoured stations which were provided. It is obviously desirable to give the most valuable life in the ship or squadron the best protection possible. The risks attaching to a change in command during a battle, from the admiral becoming a casualty, are great; they were illustrated in the case of the Russians at Tsushima most significantly. On the other hand, the visibility from most conning towers is so extremely limited that the control and direction of a great naval engagement are almost impossible from them.

A point of great importance was the physical exhaustion caused by prolonged exposure to the concussion and din of the salvoes, as hour by hour the engagement continued without decision. There were lulls, no doubt, which prevented the strain from being one past human endurance. But to keep the mind fresh and alert in such conditions requires extraordinary vigour of body and mind, and is one more argument for youth in the officer who will have to face the immense task of leading a great fleet at sea.

In the *Princess Royal* the main fire control was put out of action by two hits forward ten minutes after the Germans had opened fire. A heavy shell exploded in the admiral's port cabin, which in this ship is forward, and killed or wounded many of the fore 4-inch gun crews. It extinguished all lights, started several fires, and filled the lower conning tower with fumes. A 12-inch shell from one of the German Battle Fleet struck X turret (the sternmost) and drove in a piece of armour, killing 4 men and putting the turret out of action. The left gun, which was the one affected, was not seriously damaged though the gear for loading was badly injured. The turret could not be revolved.

B turret was hit but the men and guns in it were not injured or damaged and it continued in action. A shell pierced the side and came through a bunker on the starboard side aft,

wrecking the after engine room casings; it exploded on the port side of the ship, causing several casualties among the after 4-inch gun crews. The numerous fires which broke out in the ship were extinguished with considerable difficulty owing to the failure of all lighting systems, including the emergency oil lamps, and the damage to the fire mains.

Only fragmentary accounts of what happened in the *Queen Mary* are available. Her senior surviving officer was a midshipman¹ who was in Q turret, amidships. The ship had only been slightly damaged—though as seen from other British battle cruisers she had been hit a few times by heavy projectiles—before the catastrophe came about 4.26 p.m. Four minutes before it a heavy German shell, probably a 12-inch projectile from the *DERFFLINGER*, struck Q turret and put the right 13.5-inch gun out of action. The left gun continued firing till, at 4.26, "a terrific explosion took place which smashed up Q turret and started a big fire in the working chamber, and the gun house was filled with smoke and gas. The officer of the turret . . . gave the order to evacuate the turret. All the unwounded in the gun house got clear, and as they did so another terrific explosion took place and all were thrown into the water."

Survivors in X turret² afterwards reported a heavy hit which seemed to have been made in the after 4-inch battery, forward of X turret and which hurled splinters and debris on the top of X turret. About thirty or thirty-five rounds in all had been fired from the left gun, and with the usual system of salvo firing an equivalent number would have been fired by the right gun, when there came a first explosion, after which hydraulic pressure in the turret failed.

Immediately after the first explosion followed "the big smash," which seems to have killed or fatally injured many of the men in the turret. Two of the left gun crew were found to have been crushed under the left gun, when the survivors recovered from the shock and from their bewilderment. "Everything in the ship went as quiet as a church, the floor of the turret was bulged up, and the guns were absolutely useless,"³ but there was no sign of alarm or even of excitement. Here, as at *Coronel*, as in every British ship,

¹ J. L. Storey, report in *Julland Despatches*, p. 150.

² See narrative in Fawcett and Hooper (Abridged Edition) pp. 22-23, of Petty Officer E. Francis, one of the best accounts ever written, which does honour to the spirit and character of the sailors of the British Navy.

³ Petty Officer Francis's narrative.

officers and men were faithful to their trust until death. Nor did such of the crew as were alive below come up from their battle stations till the order was given to clear the turret. The bottom of the ship must have been blown out under the turret, as water filled the trunk of the ammunition hoist leading up from the shell room.

As the survivors reached the top of the turret, the ship had already assumed a terrible list to port, and the men who got down the ladder leading from the turret top to the deck, slid down the deck, the slope of which was rapidly steepening. The sole chance of safety was to gain the starboard side, to which with great difficulty a number of men clambered as the *Queen Mary* lay, for what seemed to them a considerable time, but what was probably in reality only a few seconds, on her beam ends. A few of them ran along the ship's side, climbed over "the slimy bilge keel," and leapt into the clear water beyond.

They had hardly done so when there came yet another "big smash" and the air "seemed to be full of fragments and flying pieces." The escape of the men in the water was almost miraculous, and many of them were burned or injured, though apparently they did not feel it at the moment. The belief of the survivors from X turret was that a shell or shells had penetrated B turret working chamber and exploded the projectiles stored there in the ready racks, whence the flash passed down to the magazine and wrecked the centre of the hull. The explosions seen in her from other battle cruisers clearly indicated that a whole series of magazines was detonated.

In the *Tiger* when Q and X turrets were hit by heavy German shells, the concussion was distinctly felt. The left gun of Q turret was temporarily put out of action and one of the two magazines of that turret was flooded by damage to the hull. The hit was on the roof in the centre sighting hood, and splinters of the armour or the actual explosion killed or mortally wounded an officer and two men, and wounded several others. The commanding officer in the turret was blinded for some seconds by the flash and by the dust which the explosion drove inboard. The unwounded members of the turret crew were in full possession of their senses, and not stunned by the concussion. The loading gear of both guns in the turret was jammed or damaged, yet, after some delay, by the efforts of the spare crew for the turret, both guns were again brought into action later in the battle, though the

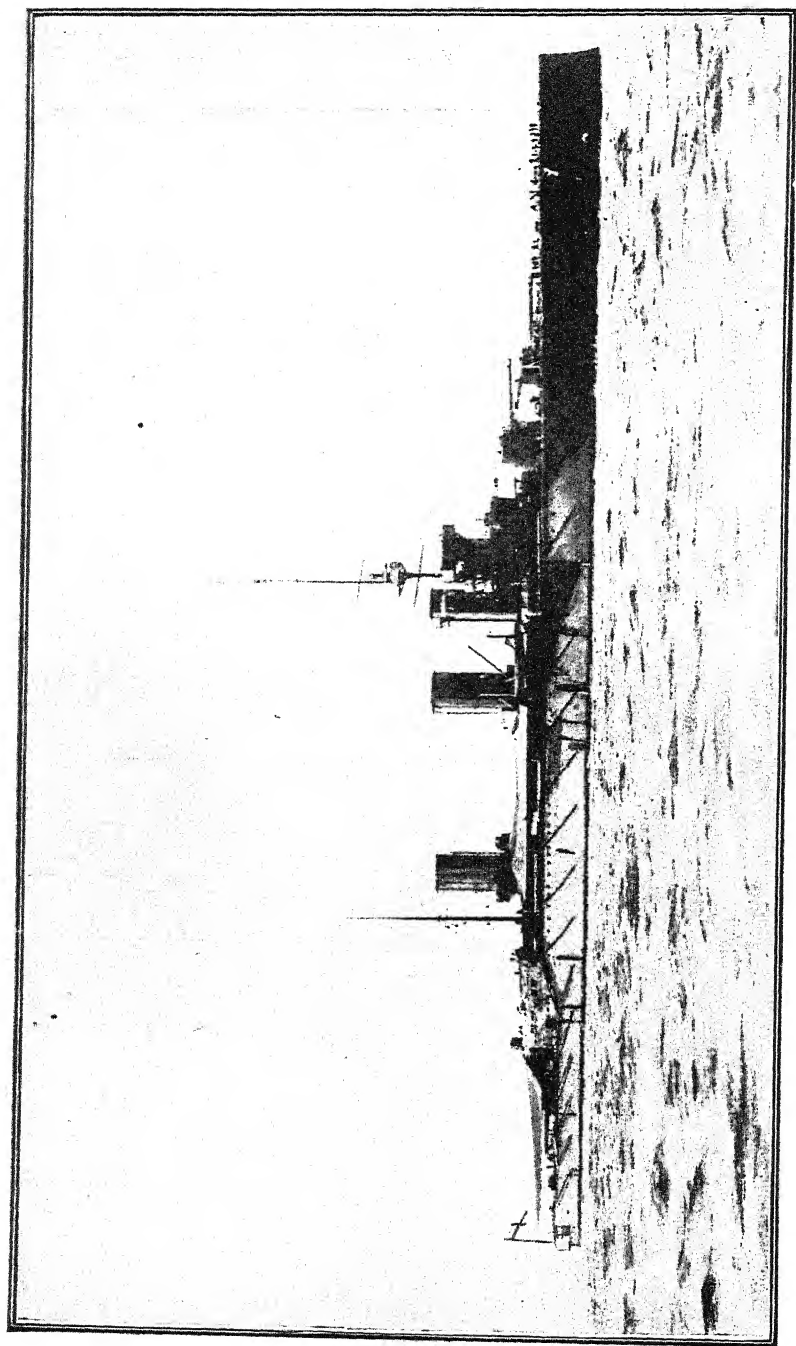
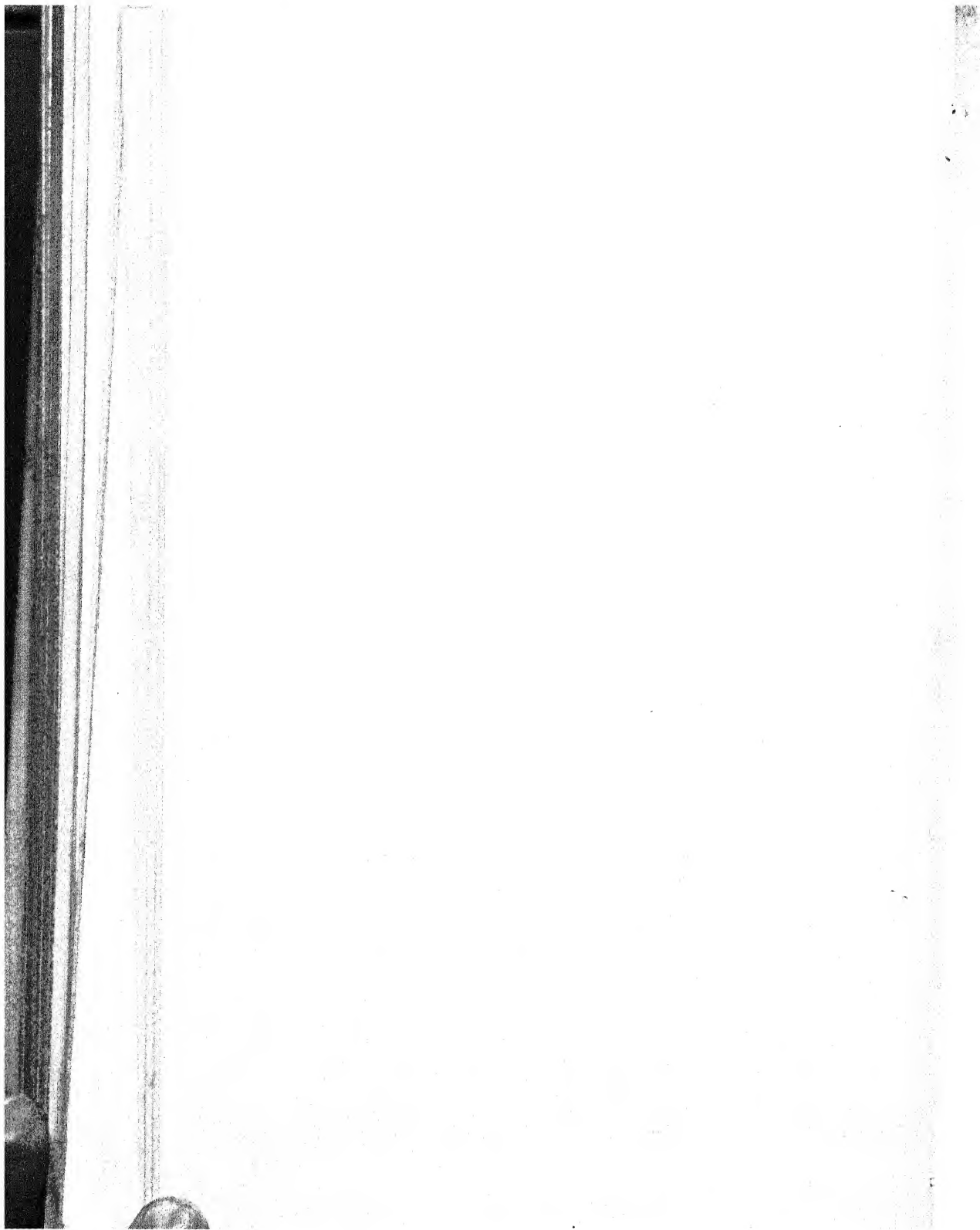


PLATE 37

THE BRITISH BATTLE CRUISER "QUEEN MARY"

At Jutland the ship carried a low fore-topmast. She was sunk by the concentrated fire of the *Derfflinger* and *Seydlitz*. She was heavily hit on Q turret, just visible amidships in the wide space between the second and third funnels: there were also bad hits near the sternmost turret or on it, and on B turret, which is seen just astern of and above the fore-turret. In the battle she carried a low topmast and no top-gallant mast. Torpedo-net booms were discarded before Jutland in the British Navy but are shown above: earlier in the war they were carried.



right gun had to be worked with hand loading which is extremely slow with such large weapons.

In X turret the hit was about the level of the upper deck; the projectile, an 11-inch one, did not explode but was found with only its nose and fuse missing, between the two guns. It killed the centre sight setter, and the fragments of armour which it drove into the turret temporarily jammed the loading gear. A more dangerous hit was one from an 11-inch gun which struck the ship a little distance abaft Q turret on her side armour, perforated the armour, at that point 9-inch thick, and burst inboard penetrating the armour deck and narrowly missing the main steam pipe in the port engine room. If the pipe had been hit all in that engine room would have been killed without any doubt, and probably the loss of the ship would have followed.

A bad fire broke out, endangering a 6-inch magazine which had to be flooded; dense smoke filled the engine room and there was extreme difficulty in putting the fire out in the darkness and thick fumes and intense heat of the burning cordite in an atmosphere already heavily charged with gases from the explosion of the German shell. This particular hit caused many casualties and was one more illustration of the need for good armour protection in a ship which has to fight in line.

In the *Indefatigable* no detailed statement was made at the time by the two survivors, both of whom were rescued by German vessels. Their evidence is understood to be similar to that of the survivors from the *Queen Mary*.

In the *Invincible*, the gunnery control officer¹ who was directing the ship's firing from the fore control top was one of the survivors. He reported that she had been struck several times before the final catastrophe arrived, but that no appreciable damage had been done by the German heavy shell, till the moment when the roof of Q turret was hit and perforated, the shell bursting inside the turret. There was the clearest evidence in this case that the flash had passed down from the turret to the magazine. From Q turret one man survived, a gunner who had been at the range finder and who was severely burned. He remembered nothing, not even the occurrence of an explosion, a mental condition which was observed in many of those who were near heavy aircraft bombs at the moment of their explosion.

The torpedo lieutenant escaped, though he was in the fore conning tower; the force of the explosion half stunned

¹ Commander Dannreuther.

him but he managed to make his way out of the hatch, which happened at that moment to be open, and he climbed up the sharply inclined bridge to the bridge railings where he found himself in the water almost before he knew what was happening. He was sucked deep down when he caught a floating kit-bag and with the aid of that regained the surface, to take part afterwards in the sealing of Zeebrugge.

In the *Defence* and *Black Prince* there were no survivors to report what happened. The *Warrior*, almost immediately after engaging, was hit on the bridge, and her armour belt must have been penetrated, as first her starboard engine room and then both engine rooms were swept by shells. Hydraulic pressure failed and two of her turrets jammed. The great fires which broke out on her main deck hindered access to the engine rooms, both of which gradually filled with water. The engine room staff displayed signal gallantry and devotion, but was helpless to stem the leaks. As the water rose the engines continued running at great risk to officers and men since they could not be stopped, and a speed of 10 or 12 knots was maintained.

The seaplane carrier *Engadine* was directed to stand by the ship, as soon as the *Warrior* was got out of immediate range of the German heavy ships. These could not be seen at all distinctly by her fire control. Her masts and funnels stood and externally she did not show much sign of her deadly injuries despite the punishment she had received—fifteen heavy hits and six or more by medium guns. The steering gear, voice pipes and means of communication were destroyed; she sank lower in the water, and during the night the wind grew in violence and all efforts to stop the many leaks failed.

The experiences of many of the crew below were grim; for some hours a party was cut off in the port engine room, and after being almost choked by the fumes of a shell, the men in it were in deadly peril from the racing cranks of the engine, while escaping steam almost suffocated them and scalded them. Of this party one after another perished till only three survived.¹ The ship was in a hopeless state when she was abandoned. It was thought at first that some at least of the *Warrior's* injuries had been inflicted by 14-inch shells, pointing to the fact that certain German ships had

¹ See Fawcett and Hooper, p. 90, for the narrative of a survivor.

been re-armed, but this was afterwards proved to be a mistake.¹

The destruction of the *Warrior* was mainly due to the failure of 6-inch side armour to resist the powerful German 11- and 12-inch shells. In the *Barham* class the far stronger 13-inch belt protected the vitals, the engine-rooms and magazines—but the thinner armour in the three ships of this class which were hit was perforated several times. The worst hit which the *Barham* sustained was near B turret; the thin side armour was pierced and heavy casualties inflicted among the medical and wireless staff in that part of the ship. The flash of the shell reached the battery deck and there set fire to a quantity of cordite, causing severe casualties. The assistant navigating officer was mortally wounded by a portion of this projectile which entered the lower conning tower; it also put the wireless out of action, which was most serious in a vessel playing so important a part as the flagship of the 5th Battle Squadron.

In the *Malaya* the violent impact of the shell which struck the roof of X turret left the roof loose so that it wobbled as the turret fired. One of the curious experiences in this ship was that two shells in succession hit in the same place² on the 6-inch armour protecting the 6-inch battery, causing the ammunition fire which inflicted such loss of life. "The most ghastly part of the whole affair," states one of the officers,³ "was the smell of burnt human flesh which remained in the ship for weeks, making everybody have a sickly nauseous feeling the whole time. When the battery was finally lighted by an emergency circuit, it was a scene which cannot easily be forgotten—everything burnt black and bare from the fire; the galley, canteen and drying-room bulkheads blown and twisted into the most grotesque shapes, and the whole deck covered with six inches of water and dreadful debris."

Damage caused by two shells exploding in outer bunkers (which in this class of ship contain oil not coal) on the starboard side led the ship to take a distinct list to starboard, but in connection with this injury one of the many advantages of oil fuel was demonstrated. The *Malaya* was brought back to an even keel by pumping oil fuel from the starboard to the

¹ The extreme difficulty of identifying the German ships in the mist and at the great range is noteworthy. *Jutland Despatches*, p. 582, shows that the British battle cruisers had not been able to make out with certainty which ships were engaging them.

² *Jutland Despatches*, p. 218.

³ Fawcett and Hooper, p. 64.

port bunkers, without increasing her displacement. Despite her injuries she reported next morning that her speed was unimpaired, a remarkable tribute to the solidity and excellence of her construction. These two shells struck below the armour, deep in the water, and when the damage which they had caused could be examined in dock it was considered to be too extensive to have been caused by gun fire, and was for some time attributed to collision with a German submarine.¹ It is now, however, known that no submarine was on or near the scene of battle.

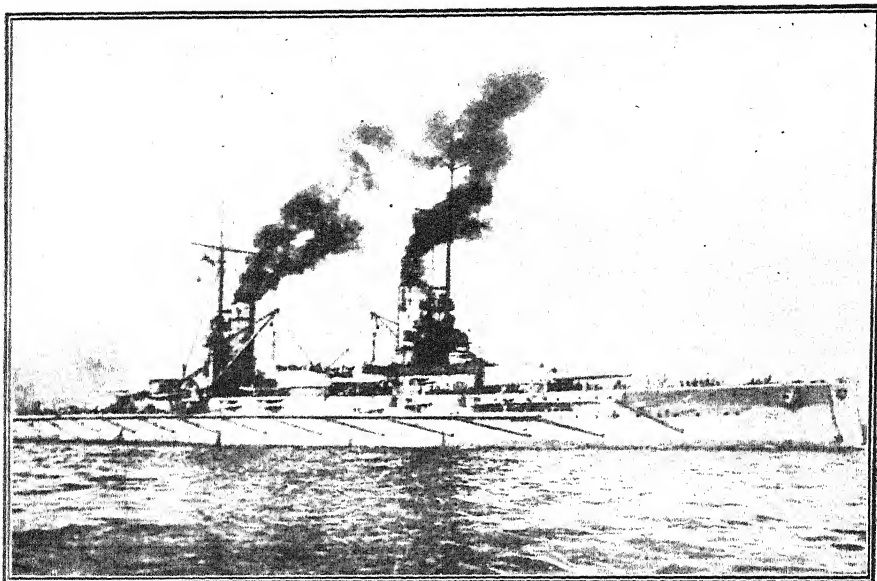
In the *Warspite* the damage was such that the ship drew 35½ feet when she was docked. The German shells, when they struck her and burst in her, produced a sheet of golden flame, "stink, impenetrable dust, and . . . appalling noise." Their blast for the moment put out lights and broke electric light bulbs near the scene of the explosion. Two stokers were found and stopped, trying to chip the fuse out of a German 12-inch shell, which had done great damage but had failed to explode. In the *Warspite*, as in every British ship, the "men everywhere were simply splendid and all very cheery."²

In the *Marlborough* no track of the torpedo which struck her was observed, and this led to the idea that the Germans had devised a torpedo which left no track on the surface. The ships of her class are well subdivided, but the damage done caused a list of eight degrees to starboard, and water came into A boiler-room to such an extent that the fires in six boilers had to be drawn. The ship was in no danger, and her trim was gradually improved by moving coal and pumping oil to port bunkers. The shock of the torpedo was violently felt in the lower conning tower; fumes of oil rose and all lights went out near the scene of the explosion. In the stokeholds the men worked with the perfect gallantry and coolness which were shown at every critical moment throughout the British Fleet.³

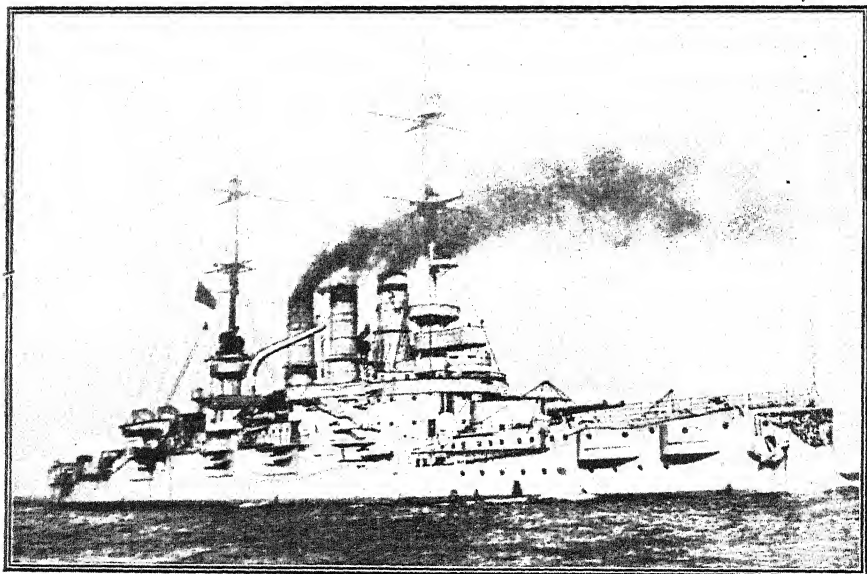
¹ *Julland Despatches*, p. 223.

² Fawcett and Hooper, pp. 66-76.

³ *Julland Despatches*, p. 104.



THE GERMAN BATTLESHIP "FRIEDRICH DER GROSSE" (IN JUTLAND RIG)
 She was Scheer's flagship at Jutland, where she escaped hits and damage. She was a typical German Dreadnought battleship. At Jutland she still carried booms for torpedo nets which the British had then discarded (see illustrations of *Queen Elizabeth* and *Iron Duke*)



THE GERMAN BATTLESHIP "POMMERN," SUNK AT JUTLAND
 She was a pre-Dreadnought of no great fighting power, and blew up as the result of torpedo hits by the British 12th Flotilla in the night after Jutland. All on board her perished. [See p. 170]

CHAPTER XXVI

Experiences in the German Ships—"Derfflinger's" Fires—The "Seydlitz" Injuries—Her Escape from the British—Losses of Each Side—Hits 100 British against 120 German—Heroism in the Destroyers—Main British Fleet Never Engaged—Result a Win on Points for the Germans—No Real Decision—Grave Consequences of the German Escape—The War Prolonged—Difficulties of the British Command—Defensive Attitude—Changes After the Battle—Catastrophe of the "Hampshire"—Death of Kitchener.

IN the German Fleet the LÜTZOW received most heavy hits—probably at least twice as many as accounted for the *Queen Mary* and from larger projectiles than hit that ship. The right side of B turret was pierced (through armour about 11-inch thick) and the right 12-inch gun disabled. The flash set fire to a cartridge and the resultant conflagration put the whole turret out of action for some time. The electric leads to Y¹ turret were destroyed and the crew of that turret forced to employ hand loading. Injuries on or below the water line had filled many of her compartments, but at 11 p.m. after the battle there was some hope of getting her into harbour, when one after another the bulkheads began to give way under the enormous pressure of the water in her hull.² At midnight the pumps could no longer control the water and keep it from reaching her dynamos. The water presently reached A turret and poured through it into the foremost boiler room.

An attempt to go astern and thus relieve the strain on the bulkheads failed because the bow sank to a draught of forty-

¹ I have adopted British nomenclature in preference to German, though the German system is really simpler and better.

² *Nordsee*, v, p. 403.

four feet, and the propellers emerged. The order, therefore, was given "draw fires"; four destroyers which had accompanied her in her last struggles came alongside; and with three cheers, in perfect order the ship was abandoned, the wounded being first removed, and the captain quitting her last when the bridge was already touching the water.

In the DERFFLINGER a skilled German observer¹ has thus described the experiences: "Whenever a heavy projectile struck our armour the tremendous shock of its detonation caused the whole ship to vibrate; even the conning tower quivered and shook. Shells which entered the ship exploded with a dull thud which was transmitted through all the voice pipes and telephones." It was at 7.13 that the ship received one of her worst hits. A 15-inch shell pierced the armour of X turret and exploded inside. "The gallant commander had both his legs torn off and with him perished almost the entire crew of the guns. In the turret itself one main cartridge and one secondary charge were set on fire by splinters."²

"The rush of flame from the burning charges penetrated to the working chamber where two main and two secondary charges took fire on either side, and thence it passed to the handing room where also two main and two secondary charges caught. The charges burned, emitting huge tongues of flame which rose to the height of a house above the turret top—they burned and did not explode as the charges had done in our adversary. That was the salvation of our ship. Yet, all the same, the effect of the ammunition fire was catastrophic. The monstrous tongues of flame killed all that they reached. Of seventy-eight men who formed the turret party, only five men were able to escape, and some of them with severe injuries, by flinging themselves out of the aperture in the turret side left for throwing away the spent cartridge cases. The other seventy-three men perished instantaneously, meeting a heroic death in the fierce activity of battle, in faithful obedience to the orders of their turret commander."

This great misfortune was followed by a second of the same character. Once more a 15-inch projectile struck one

¹ Commander G. von Hase, *Zwei Weissen Völker*, p. 109.

² *Id.*, p. 126. The ammunition was put up thus: the powder or propellant was in two sections: the main charge in a heavy and solid brass case; the secondary charge in a double silk case, contained in an outer tin case, from which it was only taken when actually loading. The German Official History (v. pp. 321-3) says Y turret was hit first and then X turret, inverting the order as given by Hase.

of the DERFFLINGER's turrets—this time Y turret roof. It pierced the roof and burst inside the turret, and the whole disaster to X turret was exactly repeated. With the exception of a single man, who was thrown by the force of the explosion through an open man-hole, leading out of the turret, all the party of eighty within perished. Here also the fire penetrated to the handing room and all the secondary charges which had been removed from their tin cases burst into flame, with some of the main charges as well.

Dense clouds of yellow smoke poured up from the two turrets when the fearful rush of flames had ceased; fumes and smoke penetrated into the very vitals of the ship; and at 7.15 the main transmitting station for the heavy artillery reported that owing to danger from gas the station must be abandoned. The order was consequently given: "Switches over to forward control position." With some difficulty the direction of the fire was resumed. At this point the DERFFLINGER was hit time after time, and Hase notes the excellence of the British shooting.¹ She was protected by 14-inch steel armour—much thicker armour than was carried by any of the British battle cruisers, and it was proof to the heaviest British shells in battle conditions though the 15-inch projectile nearly came through.

"Suddenly," he says, "we heard a noise like the crack of doom; there was a tremendous roar, a terrific detonation, and then darkness came down upon us. We felt a fearful blow; the whole conning tower rocked as if it had been struck by a giant's fist, seemed to lift upwards, and then settled vibrating in its old position." Fires broke out and were difficult to extinguish notwithstanding the fact that the vessel had little material in her that was combustible. According to Hase, the number of hits was twenty from 15-inch guns and she had "about as many heavy hits of lighter calibre." This is more than double the total stated in the German Official History, and is probably due to an unintentional exaggeration. In the engine rooms so dense were the fumes and the smoke from shells that the men there had to use gas masks. The armour belt was perforated in several places, which added to the difficulty of getting the ship back to port. She was brought safely into Wilhelmshaven on June 1.

The SEYDLITZ was always an unlucky ship and was the only one of the battle cruisers to be hit by torpedo. In her third turret she had one of the ammunition fires which caused

¹ *Zwei Weissen Vögel*, p. 128.

such loss in the DERFFLINGER; her second turret was pierced and there, too, a bad fire occurred. Great tongues of flame could be seen rising from her in one of the rare intervals of visibility when the Germans could be discerned from the British battle cruisers. The ventilation of the engine rooms broke down under repeated hits. The fans drove down smoke and fumes and the atmosphere was almost intolerable, but officers and men endured it and did their work, using gas masks. The torpedo hit breached a compartment containing two big dynamos and transformers, but the after power station was able to take over the supply of current.

About 5 p.m. there was so much water in the ship forward that the bows were almost flush with the sea and the vessel herself heeled over slowly to starboard. She was badly hit by a big shell forward, on the port side, which made a huge hole, and once more the water poured in. At 7.30 she sustained two bad hits, one on her fourth turret and the other on her bridge, which killed all the officers and men there and wounded several of the officers in the conning tower. Owing to the damage by shells and the amount of blood in the conning tower the charts by which the ship was being worked were rendered useless and illegible. The reserve charts were in a compartment which was flooded and could not be reached; the gyro compass broke down. Because of these troubles the ship ran ashore at 1.40 a.m. of June 1, east of the North Buoy at Horns Reef. She was able, however, to get off with the pull of her screws which were in deep water.

At 4.40 her draught had increased to 43 feet and the bulkheads threatened to give way. Bucket gangs had to be employed to keep vital compartments from being flooded. Though piloted by the PILLAU and by German light craft, she ran aground a second time near Horns Reef at 8 a.m. of June 1. She was got off once more after considerable delay, but at 1.30 p.m. her position again became critical. She had to go astern to save her bulkheads and the sea and wind had risen suddenly. An attempt by the PILLAU to tow her failed. Not till June 2 with the aid of two salvage pump steamers did she reach the secure shelter of the Jade, after being for hours at the mercy of the British Fleet—if it had only closed Horns Reef.

The British Fleet returned to its ports without having forced a decisive battle or inflicted on its antagonist heavier

loss than it sustained. The ships sunk on either side were as follows:

	British		German	
Battle Cruisers ...	Indefatigable ... 18,750		Lützow ...	26,300
	Queen Mary ... 27,000			
	Invincible ... 17,250			
Old Battleship ...	—		Pommern ...	13,200
Armoured Cruisers	Defence ... 14,600			
	Black Prince ... 13,600			
	Warrior ... 13,660			
Light Cruisers ...	—		Wiesbaden ...	5,500
			Frauenlob ...	2,670
			Elbing ...	4,300
			Rostock ...	4,700
Flotilla ldr. ...	Tipperary ... 1,730			
Destroyers ...	Nestor ... 1,025	S 35 ...		640
	Nomad ... 1,025	V 27 ...		640
	Shark ... 935	V 29 ...		640
	Turbulent ... 1,080	V 48 ...		1,100
	Ardent... ... 980	V 4 ...		560
	Fortune ... 1,000			
	Sparrowhawk ... 935			
	14 ships	112,450	11 ships	59,610

The British loss in tonnage was double that of the Germans and included three capital ships against one in the German total, for the POMMERN was a vessel of very small fighting value. The British armoured cruisers were vessels of an old type, but had a reasonable speed and were useful for work on distant stations and in commerce protection. Five of the British armoured ships sunk were destroyed by gun fire alone with terrifying rapidity. Of the German ships above the destroyer class only two were sunk with similar speed, both by the torpedo, the old battleship POMMERN and the old cruiser FRAUENLOB. Seven British ships which survived showed losses of over ten per cent. as against three German ships which survived.¹

The following are the main statistical facts of the battle:

Battleships.	Pre-	Battle	Total.	Total
Dread-	Dr'dno'ts.	Cruisers.	Tons.	Weight of
noughts.	Tons.	Tons.		Broadside
				Heavy
				Guns.
				11" and
				over.
British :				
648,200	—	196,900	845,100	392,310 lbs.
German :				
363,360	79,200	120,400	562,960	165,520 lbs.

¹ See Tables XXIII and XXIV.

BATTLESHIPS IN ACTION

[1916

	Casualties.		Prisoners.	Ships Sunk	Dis- plac't sunk Tons.
	Killed.	Wounded.			
British:					
6097	510	177	14	112,457	
German:					
2551	507	0	11	59,610	

The duration of battle, including torpedo actions, was from 3.48 p.m. May 31 to 3.30 a.m. June 1. As an offset to the British preponderance in weight of metal which was more than two to one, the Germans had an advantage of four to three in the armour and protection of their Dreadnoughts and battle cruisers.

Details of the casualties ship by ship and of the number of hits made are given in the Tables. Owing to the non-publication of full British gunnery reports there is some uncertainty on minor points. But the estimates of hits and rounds fired in the German Official History¹ represent a close approximation to the truth, and until exact figures are forthcoming they may be accepted. They certainly do not exaggerate the number of hits on British ships by heavy guns, though there are mistakes in them. The total of hits made by German heavy guns was 120 or thereabouts, out of 3,597 heavy shells fired, which works out at 3.3 per cent of hits. The total made by the British was 100 hits with 4,598 heavy shells (1,239 of them of 15-inch calibre) or about 2.2 per cent. of hits. The Germans fired 109 torpedoes and made three hits (*Marlborough*, *Shark*, *Nomad*); the British seventy-four, and made five hits (SEYDLITZ, POMMERN, ROSTOCK, FRAUENLOB, V 4).

One fact emphasised by the record of damage is the frequency of hits on turrets in the battle (apparently thirteen hits in British vessels and eight or nine in German ships) and the extreme importance of giving turrets adequate protection. In several cases fairly thick armour was penetrated. Thus in the *Tiger's* X turret an 11-inch shell came through 9-inch steel plating, but, fortunately for the ship, without exploding. In the SEYDLITZ and DERFFLINGER, British shells of 15-inch or 13.5-inch calibre, pierced the 10-inch steel of the turrets. The thick 14-inch belt armour of the German battleships, however, at the ranges prevailing in the battle stopped the heaviest British shells.

Even where turrets were not perforated by shells, the shock to them was in one or two cases sufficient to affect the working

¹ See Table XXI

of the guns by causing jamming. Thus a hit on X turret in the *Malaya*, which failed to pierce the roof, slowed the working of one 15-inch gun. Thin armour generally proved of little value against heavy gun attack and was repeatedly pierced; against secondary batteries, such as 6-inch and 4-inch guns, thin plating in light cruisers gave a considerable degree of protection. The roofs of the British turrets in several cases were too weak to resist heavy projectiles falling at a considerable angle, though the *Tiger* was probably saved by the fine quality of the armour at its thinnest point in Q turret roof, which detonated a heavy German shell outside without exploding the turret ammunition. Armoured decks were also pierced in two or three cases and in the *Tiger* a heavy shell which came through the side armour caused a bad cordite fire and perforated the armour deck.

For sheer heroism the conduct of the British destroyers whether in the daylight or the night fighting, has never been surpassed, and the pity is that such splendid bravery was not used to greater purpose. When the *Nestor* was disabled in the afternoon battle her commander (the Hon. B. Bingham) refused the offer which the *Petard* made to tow her on the ground that the *Petard's* own safety would be imperilled. She fought to the last and as she sank there was a brief interchange of words on her bridge. Bingham turned to his First Lieutenant (M. Bethell) with the question, "Now where shall we go?" Bethell's answer was swift and valiant, "To Heaven, I trust, sir!" And almost as he spoke he met his end. The crew of the destroyer as they took to their floats, sang "God save the King" and that famous war song, "It's a long, long way to Tipperary." The *Nomad* ended about the same time in much the same way.

The *Shark* (Commander Loftus Jones) forming one of the destroyers in Hood's screen, was fiercely engaged with German destroyers and large ships. She was struck by a torpedo abreast of the after funnel and sank, fighting to the last. Her devoted commander had his left leg shot off, but continued at his post encouraging his men. When the vessel went down a large number of men were alive, but apparently the sinking of the destroyer had not been observed and no help reached them till late in the evening, when most of them had perished. The *Acasta* was badly hit and disabled, but was next day taken in tow by the *Nonsuch* and brought into port.

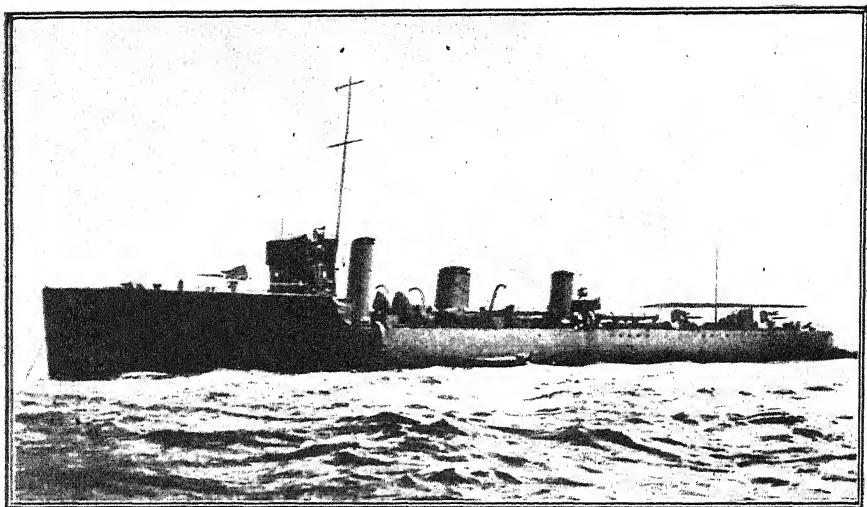
In the night fighting the *Tipperary* had her main steam pipe shot through in her encounter with the head of the

German battle line; the vessel was wrapped in a cloud of steam and violent fires broke out in her, probably from the cordite, though they may have been due to the oil in her bunkers. Most of the officers on the bridge at the time of her engagement with the Germans were killed by the storm of shells turned on her. When the *Spitfire* and *NASSAU* rammed one another, port side to port side, the *Spitfire's* crew imagined that she had attacked a German light cruiser and had no idea that their antagonist was a Dreadnought. An 11-inch shell passed close above the bridge; the British commander (Lieut.-Commander C. Trelawny) bobbed down and the shell literally grazed his head, leaving a skin-deep but troublesome wound. That he should have escaped at all was astonishing. The two vessels were steaming, the *Spitfire* at 27 knots and the *NASSAU* at about 15, and the crash of their collision was terrific.

The British casualties were the heaviest ever sustained at sea by the British Navy. At Trafalgar the total British loss was only 1,690. It was so large at Jutland because so many British ships were destroyed. In no ship that survived the battle, however severely hit, did the casualties reach 200. If the five British ships which blew up had been so constructed as to resist attack and retain their buoyancy as the *LÜTZOW*, *SEYDLITZ* and *DERFFLINGER* did, the casualties would have fallen from 6,784 to about 2,700. For there is no reason to suppose that, apart from the penetration of the flash of shells to the magazines, the British vessels which sank were hit more severely than those three German battle cruisers, two of which survived.

The battle may then be said to have decided definitely the necessity of thorough armour protection in twentieth century naval war, especially for a fleet whose surface ships may for strategical reasons have to attack when the light is against them. If the earlier actions of the war had been closely examined by the British Admiralty before Jutland, and if protection against flash had been given before the battle, as it was given after the battle, the onslaught of the British battle cruisers would probably have had totally different results. It is always easy to be wise after the event, but there certainly were indications throughout the war that the British shell had not the power it should have possessed, and that the British ammunition was most dangerously inflammable.

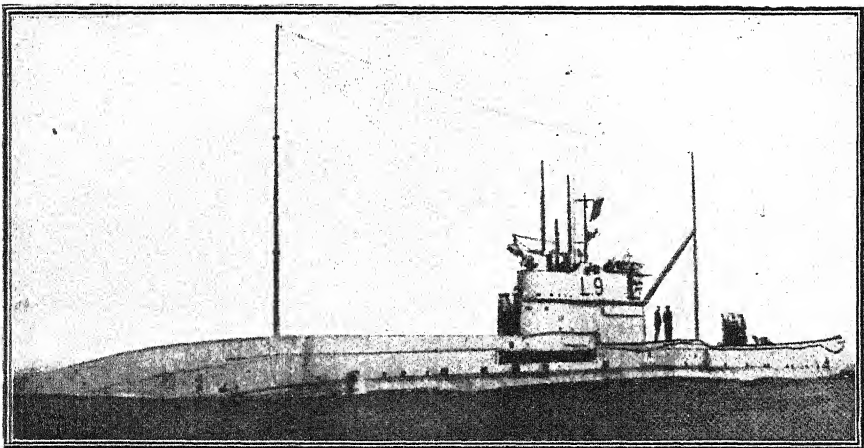
One fact requires to be emphasised. The main British Battle Fleet was never seriously engaged and had only seven



THE BRITISH DESTROYER "SHARK," SUNK AT JUTLAND

The *Shark* made a most gallant attack on the Germans. She was a typical British war destroyer—about 1,070 tons, speed 35 knots, and armed with three 4-inch guns. Her captain, Commander Loftus Jones, after his leg had been shot off, continued directing the crew to the last.

[See p. 187



THE BRITISH SUBMARINE L9

One of the best type of submarines produced: built late in the war. Of about 1,000 tons, carrying one 4-inch gun and six torpedo tubes. The telescopic masts and periscopes are seen plainly. These vessels are considered about the best submarines of moderate size ever designed. Many of them are still in service.

casualties (five in the *Colossus* and two in the *Marlborough*). In the battle cruisers which were heavily engaged, three (*New Zealand*, *Indomitable*, *Inflexible*) had no casualties at all. The British loss on a strength of about 60,000 men present was over 11 per cent.; the German loss on a strength of 45,000 6.8 per cent.

The battle has been claimed as a victory by both the British and German navies.¹ It was, however, an indecisive engagement; in view of the much weaker force of the Germans, the fair verdict is that it was no triumph, but a success on points for their arms. The sanest German estimate is that of Admiral Galster.² "Germany through the battle did not achieve any success which affected the issue of the war. . . . Militarily and politically the engagement had no influence. Nor could it have any, because a victory was not won over Jellicoe's main force, and Tirpitz's claim to a grave defeat of England at sea goes too far." Nor was the influence on neutrals profound. While the British losses were disclosed at once, after the necessary delay to warn the relatives of the dead and wounded, the destruction of the LÜTZOW, ELBING and ROSTOCK was concealed.³ This affected neutral opinion and led it to distrust the German claims, though all will allow that in war concealment of such vital facts is occasionally wise. The British reports greatly exaggerated the German loss, but they were based on honest impressions in the smoke and mist of battle; each side thought that it had sunk many more antagonists than it had actually.

But while the battle had no decisive results, the absence of any decision and the escape of the German Fleet from so powerful a British force had the gravest effect on the subsequent history of the war. Had the High Sea Fleet been annihilated or suffered even losses twice as heavy as the British, instead of losses only half as great, it would have been easier for the British Navy to open the Baltic and support Russia. The moral effect of a great naval defeat on the German people following the repulse of the assault on Verdun might have been such, accompanied as it would have been by the enormous losses on land in the battle of the

¹ The German Official History, (v, p. 446), describes it as a "severe defeat of the British."

² *England, Deutsche Flotte und Weltkrieg*, p. 118.

³ The first German report is in *Jutland Despatches*, p. 559, with one or two small misprints. The only ships of which the loss was admitted were the POMMERN, WIESBADEN, FRAUENLOB, and "some destroyers."

Somme, as to precipitate a German collapse in 1916.¹ Again, had the greater part of the German Fleet been destroyed want of skilled officers and ratings would have prevented the U boat war, and it would have been easy for the British to mine-in the Germans in the Bight. Looking back now, with the fuller knowledge which we possess, it is impossible to dispute the verdict, that "the German High Sea Fleet was the bulwark behind which the submarine menace grew."²

The destruction or decisive defeat of the High Sea Fleet would also have set free a large number of British light craft which had to be retained at Scapa or Rosyth in constant readiness for sea with the Grand Fleet, so long as there was a possibility of the Germans coming out and giving battle. It is true that Admiral Galster,³ a good German authority, regards the High Sea Fleet as having had no particular influence on the U boat war, but he does not explain where, if the High Sea Fleet had been sunk, the U boats would have obtained their officers and men.

The failure to inflict a decisive defeat on the Germans was, therefore, most unfortunate for the Allies, and was perhaps one of the main causes of the disastrous prolongation of the war, among the others being the French Plan 17. The fault of the British leadership was that it was not sufficiently energetic. Nor did it grasp the great importance of time. As the *British Field Service Regulations* of 1909⁴ lay down, "rapidity of action is of the utmost importance" in an encounter battle. On this principle, which all the experience of naval war confirms, and which was inculcated at every turn by such leaders as Napoleon and Nelson,⁵ the British Battle Cruiser Force acted.

Though handicapped by bad light, defective shells, and insufficient magazine protection, it was yet able to deliver to the British Battle Fleet the German Fleet in such a state and position that a British victory was antecedently probable. By waiting for definite information as to the German position, the leader of the Grand Fleet gave the Germans time to recover from their first surprise, when a quick deployment and violent attack offered great prospects. Napoleon⁶ has

¹ Cf. Ludendorff on the serious German position at that date. *Kriegserinnerungen*, p. 191 ff.

² Lord Beatty at Liverpool, Mar. 29, 1919.

³ *Op. cit.*, pp. 151-2.

⁴ *i.*, p. 151.

⁵ Some officers, not realising the stupendous importance of the time element in battle, criticised Nelson for his precipitate attack at Trafalgar. Corbett, *Fighting Instructions*, p. 300.

⁶ Las Cases, *Mémoires*, ii, p. 9

dwelt on the extraordinary force of resolution required in the leader who engages in a battle on which the issue of a war and the fate of a nation depend; and beyond question his immense moral responsibility clogged the action of the British commander-in-chief. There were new risks to be faced from the mine and torpedo and submarine (supposed to be omnipresent). The great decisions in war have to be made under the most disturbing conditions with lightning swiftness to assure success, and the tendency is naturally to temporize. When definite action was taken the unsatisfactory system of tactics in the Grand Fleet enabled the Germans thrice to escape from a most dangerous situation.

The deployment to port is not strongly condemned by the German Official History; and as to the much discussed turns-away from destroyer attacks, they appear to have been the recognised tactics of both fleets and of all formations in both fleets. But the British battleships were slow in turning back and from their inability to execute simultaneous turns, as the German battleships did, were unable to maintain close contact and action with Scheer. The omission to inform the destroyer flotillas of the German Fleet's position, and to order them to seize every opportunity of attacking in force, was unhappy. The destroyer leaders might think, and probably did think, that their services were needed for the fresh battle which all expected next morning; and in that case were quite right not to act on the principle of the initiative, and without further orders to concentrate all their energy on attacking the German heavy ships. By its pre-occupation with the defensive, the British command blunted the powerful destroyer weapon and prevented it from adequately utilising the magnificent opportunities which offered themselves in the night.

The absence of any reserves behind the Grand Fleet has been given as a reason for extreme caution in the British manœuvres. As a matter of fact, eight British capital ships, which were complete, or nearly complete, were not at Jutland, against four German ships of the same class. The British vessels were the 15-inch gun ships *Resolution*, *Royal Sovereign*, *Renown*, *Repulse*, and *Queen Elizabeth*; and the older *Emperor of India*, *Dreadnought*, and *Australia*. The German vessels were the 15-inch gun ships BADEN and BAYERN, with the new battle cruiser HINDENBURG, and the older battleship KÖNIG ALBERT. The British had, therefore, a considerable

reserve, and as a further reserve, seven French Dreadnoughts would have been available.

Of the damaged British ships, the *Warrior* had to be abandoned at sea on June 1, and sank immediately afterwards. The *Warspite* and *Marlborough* were both attacked by submarines, the *Warspite* by U 51 and U 63, and the *Marlborough* by U 46, but all these attacks failed. Neither the main force of the Grand Fleet, nor the Battle Cruiser Force was troubled by the hostile submarines.

This was the last serious engagement between surface ships in the war. The German Fleet, however, was at sea less than three months later, though it did not show any readiness to accept battle; but there were no more attempts at "tip and run" raids on the British coast in the war, probably because German officers and men generally realised that their escape at Jutland had been in no small measure due to good luck. Immense improvements were made in the British ships after the battle, and the magazines were rendered secure against flash;¹ extra armour protection was given them against the fall of shells through the armoured decks; the side plating at important points and the turret roofs were strengthened. In fact, those steps were taken which had in the German Navy followed the battle of the Dogger Bank.

At the same time the British ammunition was taken in hand, and new types of shell² were introduced (though they were not ready for service use till 1918) which doubled the power of the British heavy guns. Torpedoes with a range of 19,000 yards were supplied. Gun crews were protected against the burns on the hands and face which had proved so terrible in the battle by masks and gauntlets of fireproof material. It is hardly an exaggeration to say that the resistance and hitting power of the British capital ships were increased fifty per cent. More powerful range-finders and quicker methods of getting on the target were also introduced, so that hitting could be established in half the time previously required.

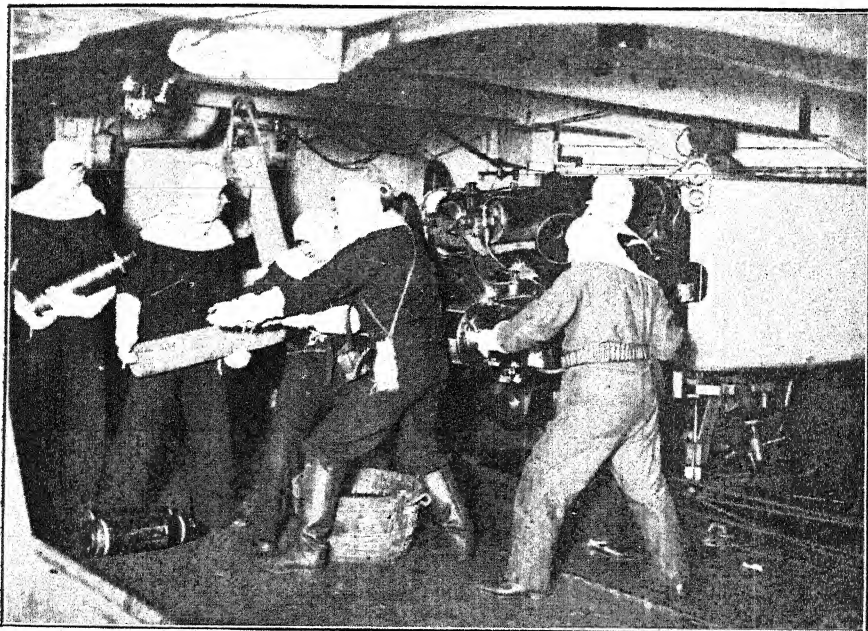
In spite of the unsatisfactory results which it had given in the battle, the British system of battle tactics remained substantially unchanged—"to approach the enemy as closely as possible in parallel lines ahead (columns of divisions line ahead) and develop at the last minute a battle line, whose

¹ Schoultz, pp. 249-20. Thick woollen flash-screens were also introduced widely with good results.

² Cf. Sir R. Hadfield (reported in *Engineer*, April 1, 1921) who has pointed out that the British shells were faulty because of bad Admiralty proof requirements.



BATTLE DRESS WORN AFTER JUTLAND IN THE BRITISH NAVY
Gas masks are being used; fireproof material protects the head and hands against cordite flash and burns.



GUN CREW IN A BRITISH BATTLESHIP'S CASEMATE AFTER JUTLAND
Shows the protection to the head and hands. The breech of the gun is open and the breech block can be just seen where the left hand of the right hand member of the gun crew is resting. One man holds a shell and another a charge of cordite—the long cylinder.

unwieldy length and awkwardness made envelopment or pursuit of the enemy difficult." This method was regarded with uneasiness by many officers in the fleet¹ and, so long as it continued in force there could be little prospect of bringing to decisive battle an enemy with the power of manœuvring that Scheer's fleet possessed, and the facilities for evading a decision which torpedo attack and the use of smoke screens give. Nor was any special effort made to develop initiative in the commanders of squadrons.

A serious British disaster followed the return from this indecisive battle. About 7.35 p.m. on June 6 the British armoured cruiser *Hampshire*, with Lord Kitchener on board, on his way from Scapa to Russia, struck a mine off the Brough of Birsay, west of the main island in the Orkneys, and went down in fifteen minutes in a terrific sea. Only 12 men survived the disaster, in which Lord Kitchener, his staff, and all the officers on board perished. Wild tales of treachery were current at the time and afterwards, but the facts exclude any such possibility. The field of twenty-two mines in which the *Hampshire* sank was laid by U 75 (Lieut.-Commander C. Beitzel²) in the swept channel to the west of the Orkneys, on May 29, as part of the operations planned by Scheer which issued in the battle of Jutland. On the day of Lord Kitchener's departure a great gale was raging with mountainous seas breaking from the north-east. He himself insisted on the importance of leaving at once without any delay, and Jellicoe yielded to his wishes, though with reluctance.

The original intention had been that the *Hampshire* should take the easterly route from Scapa Flow; but as with the gale it was impossible to sweep the channel on that side, and escorting destroyers could not accompany the ship, the final decision reached was to send the *Hampshire* by the western route, where she would be better sheltered. Even so there were two possible courses, by Sule Skerry, that lonely light thirty miles west of Orkney set in a raging sea, or close under the Orkney coast. The second route was chosen because it was the more sheltered, and, further, it had been under constant observation and was much used by auxiliaries. At 5.30 p.m. the *Hampshire* steamed out of Scapa convoyed by two destroyers, *Unity* and *Victor*. Shortly after

¹ Discussions with officers of the Grand Fleet. So Schoultz, 228.

² Perished in Sept. 1918 in U 102. U 75 under another captain was sunk in Dec. 1917.

she left, the wind shifted to a fifty-mile gale from the north-west, and they were quite unable to keep up with her in the sea that was running. Even if they had been there in that storm with the intense coldness of the water it is doubtful whether they could have effected much. When the ship was mined discipline was faithfully maintained to the end, though in the gale boats could not be lowered. Only twelve men reached the iron coast of the Orkneys alive. Kitchener was seen on deck, collected and calm; and thus this great servant of England passed from earth.

Two accidents brought about the loss of his life and the death of 700 officers and men: the storm which prevented the usual route from being followed and the shift of the wind which prevented destroyers from accompanying the *Hampshire* on her westward route. If Kitchener's intended journey to Russia had been betrayed, no one could have counted on these mischances.¹

¹Since this book was printed, a most important account of the Lützow's experiences has been given in the *Marine Rundschau* for May, 1926, by Commander G. Paschen, her gunnery officer at Jutland. A good abstract of it appeared in English in the *Engineer* for July 9, 1926. Paschen states that when Beatty's cruisers were sighted, ships of the 5th Battle Squadron could be seen astern of them, at a distance of about 28,000 yards from the Lützow. The Lützow fired salvoes from groups of turrets, from the four guns in the two forward turrets and the four guns in the two after turrets, alternately. The German fire became accurate at about 3.50; the British "took endless time to find the correct range."

The feeble effect of the British projectiles he ascribes in part to the British use of black powder; "their impact had the full force of their large calibre; wherever they hit there was a violent shock . . . but the effect of the burst was small." He thinks that if he had fired armour-piercing shell in the first hour of action, "the *Lion* and her admiral would probably not have lived to tell the tale." The heavy hits on the Lützow were apparently secured by the *Invincible* or they may have come from the *Lion* and *Princess Royal's* guns. One shell struck A-turret and flew off against B-turret, perforating the 10-inch armour, killing many of the men in the turret, and setting fire to two cartridges in the hoist. One gun was put out of action; the other gun, protected by a bulkhead, remained serviceable.

Between 6 and 7 p.m. (i.e. when the Grand Fleet arrived) "not a single British ship was in sight," so bad was the visibility from the German standpoint, while the Lützow was under "the heaviest fire, being plainly outlined against the clear western sky." The German fire-control system worked perfectly, but it was, Paschen maintains, distinctly inferior to the British director system. He attributes the blowing up of so many British ships solely to ammunition fires; "with us such fires remained local fires only . . . not destructive to the ship." From this account it appears that only one torpedo was used to sink the Lützow when she was finally abandoned.

CHAPTER XXVII

Scheer's Sortie in August, 1916—"Nottingham" and "Falmouth" Sunk—Jellicoe becomes First Sea Lord—The Dover Barrage—German Destroyer Raids—New Weapons at Sea—Belgian Coast Bombardments—Keyes replaces Bacon—New Channel Barrage Laid—Activity of the U Boats—Plans to Seal the German Bases—Northern Mine Barrage—Scandinavian Convoy Twice Raided and Destroyed—Action of November 17, 1917, in the Bight—United States Battleships at Scapa—German Attack on the Dover Barrage—Blocking of Zeebrugge—Splendid Conduct of the Navy—Scheer's Last Voyage—Plans to Cripple the Grand Fleet—Mutiny in the German Fleet—Last Raids of the German Commerce-Destroyers.

FOR some weeks after Jutland there was comparative inaction on the part of the High Sea Fleet, while the damaged ships were being repaired. But in this interlude and after it mine-laying was so vigorously carried on by the German submarines as to cause anxiety lest the Grand Fleet should be mined in. The grave consequences of the escape of the German Fleet were already revealing themselves. A large addition to the mine-sweeping squadrons attached to the various sections of the Grand Fleet became necessary, thus withdrawing vessels from patrol work. In mid-August, as all his units except the SEYDLITZ and DERFFLINGER were again ready for sea, Scheer planned a fresh operation to trap a part of the British Fleet, using his surface ships in co-operation with eight Zeppelins and all the available submarines. His U boats were not stationed off the British bases as they had been before Jutland; they were disposed on patrol lines athwart the course by which the British forces were expected to move. The main German Fleet was to steam towards Sunderland, and, if the British did not appear in strength, to

bombard that place at dusk on August 19. A line of six submarines was placed in the North Sea north-east of Blyth and another off Flamborough Head. Two patrol lines of small submarines from Zeebrugge were disposed on the route up the Dutch coast, north-west of Terschelling, commonly followed by Tyrwhitt.

To reinforce his battle cruisers, now reduced to the *MOLTKE* and *VON DER TANN*, Scheer gave Hipper the new 15-inch gun battleship *BAYERN*, and the two fastest German Dreadnoughts, *GROSSER KURFÜRST* and *MARKGRAF*. Hipper's combined force was to steam twenty miles in advance of the German main force, which did not include the old pre-Dreadnought battleships. The British intercepted signals which showed clearly that some move was imminent, and at 5 p.m. on August 18 the Grand Fleet put to sea. The tactical arrangements were precisely the same as they had been at Jutland, except that Beatty's force was twenty miles off the Main Fleet. Four German airships scouted to the north of Scheer, forming a line across the North Sea, and four more scouted to the west and south-west, so as to eliminate all possibility of a British surprise.

In the British Battle Fleet a captive balloon was towed by Sturdee's flagship, the *Hercules*. As the Grand Fleet moved down the North Sea, German submarines were encountered and several British vessels had torpedoes fired at them. At 5.50 a.m. of August 19 the British light cruiser *Nottingham*, while steaming 20 knots, was twice hit with torpedoes by U 52. She continued afloat but, notwithstanding all the efforts which were made to protect her, she was hit a third time an hour later, and she had then to be abandoned and went down. The Main Fleet, after two hours run north, due to Jellicoe's uncertainty whether the *Nottingham* had been torpedoed or had run into a minefield, resumed its course; at 9.45 a.m. it sighted a Zeppelin watching it, but out of range.

Directional wireless showed the German Fleet to be fast approaching the Grand Fleet and expectation of a battle was strong. The visibility was extremely good; the British ships had had their most dangerous defects remedied, though their inferior shells were still a grave handicap, and there were twenty-nine battleships (eight of them mounting 15-inch guns) and six¹ battle cruisers available, against seventeen German battleships and two battle cruisers. Obviously

¹ The *Indomitable* was refitting.

Scheer thought the odds against him much too heavy as he turned back at 2.35 p.m. He had already temporarily lost one ship. The battleship *WESTFALEN* was attacked by the British submarine *E 23* on patrol in the Bight, and was hit by a torpedo. A second attack on her failed, though it was most gallantly delivered. The German vessel, if not seriously damaged, was compelled to return to port; and so soon as the sea was clear *E 23* rose and reported by wireless the German position. This was the first occasion on which long-range wireless had been employed by British submarines. The Grand Fleet turned back soon after the Germans did, as there was no reason for running further risk from the German submarines. On the way back to the bases the light cruiser *Falmouth* was hit forward and aft by two torpedoes, fired by *U 66*, while she was zig-zagging at 23 knots. She was still able to steam and every effort was made to cover her retreat, but next day at noon she was hit by *U 63* with two more torpedoes and sunk. *U 66* was depth-charged and slightly damaged. The British loss was two good light cruisers and 48 men killed.

Meantime Tyrwhitt with his light cruisers and some twenty destroyers about 6 p.m. gained touch with the German Fleet. Though Scheer declares that the conditions were favourable for a night attack, none was attempted, probably because the chances of inflicting serious damage were small, where the light craft had no support from heavy ships. Scheer's operation was thus distinctly successful; at the price of some damage to one battleship he had sunk two British vessels and disproved the confident theories of those who declared that after Jutland the German Fleet would not again venture to sea. Moreover the success of his submarines against the *Nottingham* and *Falmouth* had a most disturbing effect on the British command.

It had previously been assumed that light cruisers need not be screened with destroyers when at sea and steaming fast. Now it became requisite to provide a screen of one destroyer for each light cruiser, so that the destroyers, which were the most effective vessels for offensive action against submarines, were more than ever absorbed in defensive duties. In September the Grand Fleet was reinforced by the new battle cruisers *Repulse* and *Renown*, each carrying six 15-inch guns, but so weakly armoured that they were regarded with disfavour and had to have over a thousand tons of additional plating built in to them. On November 28, Sir J. Jellicoe

bombard that place at dusk on August 19. A line of six submarines was placed in the North Sea north-east of Blyth and another off Flamborough Head. Two patrol lines of small submarines from Zeebrugge were disposed on the route up the Dutch coast, north-west of Terschelling, commonly followed by Tyrwhitt.

To reinforce his battle cruisers, now reduced to the MOLTKE and VON DER TANN, Scheer gave Hipper the new 15-inch gun battleship BAYERN, and the two fastest German Dreadnoughts, GROSSER KURFÜRST and MARKGRAF. Hipper's combined force was to steam twenty miles in advance of the German main force, which did not include the old pre-Dreadnought battleships. The British intercepted signals which showed clearly that some move was imminent, and at 5 p.m. on August 18 the Grand Fleet put to sea. The tactical arrangements were precisely the same as they had been at Jutland, except that Beatty's force was twenty miles off the Main Fleet. Four German airships scouted to the north of Scheer, forming a line across the North Sea, and four more scouted to the west and south-west, so as to eliminate all possibility of a British surprise.

In the British Battle Fleet a captive balloon was towed by Sturdee's flagship, the *Hercules*. As the Grand Fleet moved down the North Sea, German submarines were encountered and several British vessels had torpedoes fired at them. At 5.50 a.m. of August 19 the British light cruiser *Nottingham*, while steaming 20 knots, was twice hit with torpedoes by U 52. She continued afloat but, notwithstanding all the efforts which were made to protect her, she was hit a third time an hour later, and she had then to be abandoned and went down. The Main Fleet, after two hours run north, due to Jellicoe's uncertainty whether the *Nottingham* had been torpedoed or had run into a minefield, resumed its course; at 9.45 a.m. it sighted a Zeppelin watching it, but out of range.

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was appointed First Sea Lord and was succeeded in command of the Grand Fleet by Sir D. Beatty. The command of the Battle Cruiser Force was given to Vice-Admiral Sir W. Pakenham. The German commerce-destroyer MÖWE, followed by another vessel of the same type, the WOLF, got safely to sea past the Grand Fleet cruisers about this date.

In October the German Government decided to resume U boat attacks on merchant shipping and thenceforth the attention of the German Fleet was mainly concentrated on giving support to its submarines. On November 4, the two submarines U 20 and U 30 ran ashore off the Jutland coast near Bovbjerg, and as there were reports that British surface ships were approaching to attack them, the 3rd Squadron of the High Sea Fleet went out to their aid. U 20 could not be got off and had to be destroyed, and while cruising near the place the two German Dreadnoughts, GROSSER KURFÜRST and KRONPRINZ, were each hit by a torpedo from the British submarine J 1 (Laurence) which was patrolling in proximity. Neither ship was much damaged, but the boldness of J 1's attack led William II to blame Scheer for risking two valuable German battleships. Scheer's defence from the naval standpoint was entirely sound, that torpedo craft must not be left unsupported by heavy ships, and that the chief business of the High Sea Fleet had now become that of covering the departure and arrival of U boats.

The resumption of the submarine war against merchant shipping meant pressure on the forces holding the Straits of Dover. The German torpedo craft in Zeebrugge displayed increased activity; on June 23 they seized the British steamer *Brussels*, which was on the passenger service to Holland, and took prisoner her captain, C. Fryatt. He was charged with acting as a "franc tireur,"¹ because on March 28, 1915, he had endeavoured to ram a German submarine that was attacking him. Tried by court martial on this charge, contrary to all the laws of naval war, he was condemned to death on July 27, 1916, and shot. This was one of the most unpardonable German war crimes, as the right of a merchantman to defend herself against attack has been recognised from time immemorial. When subsequently another British merchant captain (J. Blaikie) fell into German hands, and German newspapers suggested that he might be treated in

¹ See Hall, *Law of Naval Warfare*, p. 54. Garner, i, p. 407. ff, an able and impartial American authority, condemns the execution of Fryatt as a "judicial murder."

the same way, the threat of instant British reprisals was made, though not officially, and seems to have had some effect. Off the Flanders coast there was frequent skirmishing between British and German destroyers, in which actions the British suffered considerable losses.

On October 26 the Germans at last made an attack on the Dover barrage. It had been long expected, but the difficulty of guarding against it was great owing to the limited number of British destroyers.¹ The German force under Commodore Michelsen consisted of eleven powerful and modern destroyers. On a moonless night with a high tide, when the British mines at the entrance to the Channel were submerged, they left Zeebrugge and sank six of the drifters guarding the barrage with the old British destroyer *Flirt*, in which vessel all but nine of the crew perished.² They caught and sank the empty army transport *Queen* off Cape Grisnez, and torpedoed the British destroyer *Nubian* (which had taken them for British vessels), blowing off her bows. She was subsequently salvaged and fitted to the fore part of the *Zulu*, which destroyer on November 8 had her stern blown off, and of the two halves of two different vessels the *Zubian* was formed. The destroyer *Amazon* was badly damaged by a shell, while the German vessels escaped without any serious damage. The Dover force was numerically insufficient³ to guard against such a "tip-and-run" attack, and it was under this disadvantage, that it had always to challenge and find out the character of strangers in the night before attacking. The Germans stood on no ceremony; they fired first and inquired afterwards. They almost invariably used torpedoes, whereas the British boats generally used the gun which blinded everyone with its flash in night actions. The bravery displayed by the fishermen in the drifters was magnificent; unfortunately they had to suffer severely and lost 45 killed, 10 taken prisoners and 5 wounded.

Another German destroyer raid was made on November 23, when six British drifters encountering some six German destroyers offered so bold a front that the Germans retired. On November 25, however, the German boats captured a British armed trawler off the east coast and sank her, taking off her crew. During the night of January 23, 1917,

¹ *Dover Patrol*, ii, pp. 340-1.

² Her searchlights were running to pick up the men from the drifters.

³ See *Dover Patrol*, ii, p. 330, as to the strain on Bacon's small force of destroyers, and Thomazi, *La Guerre Navale*, pp. 179-80, on the practical difficulties which the Allies had to face. The only remedy was a higher degree of concentration in the British force.

Tyrwhitt's destroyers came upon a German division of boats moving to Emden from Zeebrugge and there was a sharp brush in which the large British destroyer *Simoon* was torpedoed and sunk with a loss of 47 men. In a second encounter that same night V 69, a large modern German destroyer, was much damaged and forced into Ymuiden in a badly battered state with heavy casualties and S 50 was driven back to Zeebrugge. V 69 was repaired and was able to return to Emden.

In the night of February 25, 1917 the Zeebrugge destroyers once more came out and stole over to Thanet, where they shelled Broadstairs and killed a woman and her baby; they also bombarded Margate at long range. They were finally driven off by the British destroyer *Laverock*. On March 17 they were out once more and managed to torpedo the British destroyer *Paragon* as she was challenging, sinking her in eight minutes with all her crew save eight; the *Llewellyn* was torpedoed a little later with her searchlights running to pick up the *Paragon's* men, but she was not much damaged. Ramsgate was shelled at long range. On March 26 they slipped out along the Flanders coast to Dunkirk and fired sixty shells into that hard-pressed town.

On April 7 British coastal motor boats made a successful attack on a German destroyer force off Zeebrugge and torpedoed and sank G 88, a large new boat of 1,000 tons. This was the first British success with this new type of vessel.

On April 20, 1917, the German 2nd Flotilla in two sections broke into the straits and at long range fired shells into Calais and Dover. One of the sections, six destroyers strong, was caught on the retreat by the British flotilla leaders *Broke* (Commander E. R. G. R. Evans, two 4.7-inch and two 4-inch) and *Swift* (Commander A. M. Peck, one 6-inch and two 4-inch) on patrol at the west end of the barrage. The two antagonists met on opposite courses port side to port side; the British fired torpedoes one of which hit and disabled G 85. The *Swift* fired her 6-inch gun which blinded everybody with its flash and caused her to lose sight of the Germans. The *Broke* rammed G 42, the last boat in the German line, at the same time torpedoing her and pouring into her a heavy fire. G 42 began to sink and the surviving Germans rushed on board the *Broke* to surrender. It was supposed that they were boarding and several of them were shot down before the mistake was corrected. G 85 was quickly sunk with another torpedo; she went down firing to the last with one of her 4.1-inch guns.

From the two boats sunk 118 Germans were rescued, but of these 30 died of wounds or exposure. Both the *Broke* and *Swift* were much damaged.

Admiral Bacon praises the sound tactics adopted by the British boats in using the torpedo and the ram.¹ His method of organising the patrols was this after the affairs of March: during the night the destroyers worked in groups of four and moved on lines to cover the points the Germans were likely to make for. One end of each of the lines patrolled was within sight of a navigational light so that positions and times of patrols could be accurately checked; and where two lines of patrols approached each other, the times of turning were so arranged that they could not meet. Any strange vessel seen could thus be attacked with confidence. His disposition, however, entirely failed to prevent the passage of U boats.

The German destroyers were out again in the night of April 24-25, when they shelled Dunkirk at long range and sank the small French destroyer *Etendard* with all her crew of 75; on the 27th they shelled Ramsgate and Margate at long range, killing two persons and wounding three, but received so sharp a fire from the 6-inch guns mounted in new batteries ashore and in the monitor *Marshal Ney*, that they did not attempt to repeat their exploits for many months. Special precautions were taken in the way of obscuring or removing lights and buoys with good result.² On May 2 an event of some historic importance took place, as the British steamer *Gena* was sunk by a torpedo discharged from a German seaplane off the east coast. The first use of this weapon had taken place in the Dardanelles on August 12, 1915, when it had been employed by the British.

In 1916 and 1917 at the wish of the military authorities there were renewed bombardments of the German coast defences in Flanders and naval bases, with the object of keeping German attention fixed on this important section of coast. But not until 1917 were two fairly effective monitors available, in the *Erebus* and *Terror*, which mounted 15-inch guns and could steam 12 knots as compared with the 5 or 6 knots of the earlier monitors. Each side used smoke screens and the British fire caused considerable damage to the workshops at Ostend and Zeebrugge but failed to destroy the lock gates. The basins at these two ports became distinctly uncomfortable for German torpedo craft, and the German destroyers had to use Bruges as their base while concrete

¹ *Dover Patrol*, ii, pp. 353-58.

² *Dover Patrol*, ii, p. 387.

shelters were made to protect the U boats. The *Terror* was torpedoed on October 19, and though not seriously damaged owing to her "bulge," had to be docked; on October 28 her sister ship, the *Erebus*, was hit amidships by an electrically controlled motor boat, carrying a charge of probably from 300 to 500 pounds of high explosive. The boat had no one on board and was fitted with a drum of insulated cable connecting it with the shore; directions for steering it were signalled by an aeroplane. The speed at which it ran was some 30 knots. A similar type of vessel had been tried before the war in England.

On this occasion in the *Erebus* 2 were killed and 15 wounded from the debris thrown up by the explosion, and the "bulge" was blown in, but the ship herself did not leak.¹ Three other attacks about this time with this type of controlled boat failed completely. In an action off the Flanders coast on June 5, Tyrwhitt's Harwich destroyers sank S 20 (550 tons). At the close of 1917 German submarines were still able to pass the Straits of Dover without immoderate difficulty, but mines were ready for the laying of an effective barrage according to the Admiralty plans. There were to be eight lines in the shallower sections, at levels varying from 20 to 70 feet, with fourteen lines in the deeper water. UB 56 was sunk in the field on December 19, 1917. It was at this juncture that Vice-Admiral Bacon was retired from command and succeeded by Vice-Admiral Sir R. Keyes.

The change in command was due to the determination to seal the Straits by a constant surface patrol with searchlights, and fixed lights, in combination with the mine fields. It is only just to Admiral Bacon, an officer who has been much criticised and had himself been a bitter critic, to say that he maintained excellent relations with the French, and that with weak forces for two years he prevented any serious raid on the channel traffic. He failed in closing the Straits to the submarines,² but this task was almost impossible to achieve till effective mines were ready. There is no doubt whatever that the danger in the Straits of Dover was always serious up to the collapse of the German armies; and no graver error was committed in the whole war than that of the Allied command on land which allowed the Germans first to seize and then to retain almost undisturbed the Flanders coast.

¹ *Dover Patrol*, ii, pp. 172-3.

² The Germans removed two sections of net and buoyed the gap, apparently without their action being detected.

The German submarine campaign will be dealt with in greater detail later; but while the attitude of the German Government varied from time to time, the U boats continued active and the loss of merchant shipping proceeded steadily at a rate monthly which never sank below 100,000 tons, and generally rose above it. The German submarines sunk in northern waters were only fifteen in 1916. Of the larger boats U 68 was sunk by a decoy ship, U 51 was torpedoed by H 5 in the Bight, and U 74 sunk by trawlers. On January 3, 1917, the German Government announced that it would observe no restrictions in its submarine war and would close to all shipping, including that of neutrals, the zone round the British Isles and the coast of France, subsequently extending this zone to the whole Mediterranean, save for the coast of Spain and a narrow channel giving access to the Greek coast.

This decision was reached because Germany was ready to face war with the United States, and because the heads of the German Navy definitely guaranteed that, if a ruthless submarine blockade was enforced, Great Britain must collapse by July, 1917. President Wilson broke off diplomatic relations with Germany, but he then made an attempt to form a league of neutrals which would coerce both the Allies and the German Powers into signing such a peace as seemed proper to him. His efforts in this direction failed, and as United States merchantmen were sunk by the Germans with loss of American lives, he was forced reluctantly to enter the war on April 6, 1917.

Mr. Wilson's original intention seems to have been to leave the Allies in Europe to fight his battle with Germany. Such is the clear inference from Colonel House's disclosures. He therefore adopted a policy of passive defence and only sent to Europe, on May 4, 1917, six destroyers of the fine *Wadsworth* type, which were based on Queenstown. The moral effect of the entry into the war of the United States was considerable, notwithstanding the paucity of the immediate aid given to the Allies. It had probably some part in causing the mutinies which began in the 3rd Squadron of the High Sea Fleet in May, 1917, by weakening the morale of the German seamen. In August, the crews of the PRINZREGENT LUITPOLD and FRIEDRICH DER GROSSE showed insubordination. The ringleaders were tried by court martial, and two stokers were executed,¹ but the mutinous

¹ Galster, p. 161.

spirit remained and grew more formidable, stimulated later in the year by the progress of the revolution in Russia.

In September, a conference of Allied naval representatives was held in London to discuss plans for future operations, the chief object being to provide the United States Government with information how best the American Navy could be employed to serve the common cause. Among the points considered was a close blockade of the German coast.¹ Schemes prepared by Jellicoe and the British Staff were submitted for sealing the main German bases on the North Sea with old ships. It was explained that, as the Allied loss in merchant vessels had been so heavy, owing to the activity of the U boats, warships would have to be employed; and it was suggested that all the Allies should contribute according to their power, if the scheme was adopted. The number of vessels estimated to be required and the totals to be given by each navy were stated as follows:

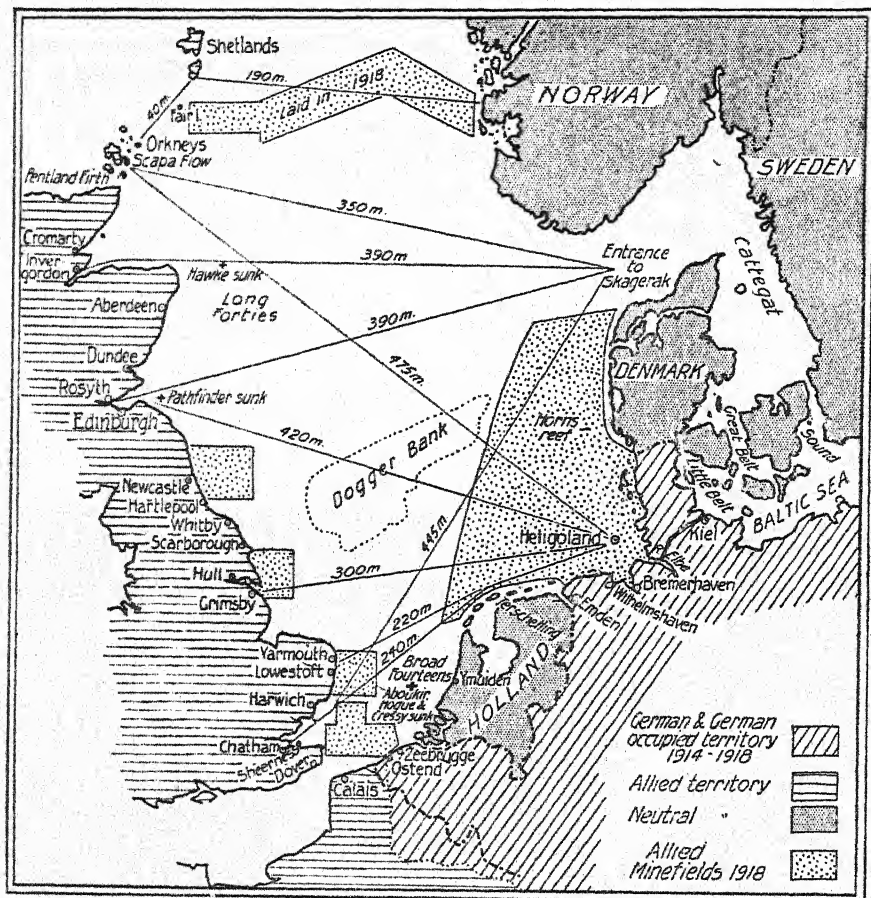
England	18	battleships	13	cruisers	U.S.A.	12	battleships	8	cruisers
France	5	"	12	"	Japan	2	"	7	"
Italy ...	3	"	3	"					
						40		43	

All these vessels would have been sunk in the Bight of Heligoland, and the various representatives were invited to ask their governments whether they were willing to make such a sacrifice.

The alternative proposal to this gigantic sacrifice was to employ nets and mines, but Jellicoe expressed doubts as to the value of such barrages and specially mentioned their failure at Dover (before the special barrage laid down by Keyes), Otranto, and off the Dardanelles. Without nets a mine barrage would require an additional million mines, besides the mines which at that date had been laid, and British industry could not supply them. The delivery of the new type of mine introduced in 1916 was only at the rate of about 5,000 a month.² Both proposals were severely criticised. The Japanese Admiral Funakoshi, who had taken part in the attempt to block Port Arthur, pointed out that blocking operations seldom were completely successful. "We blocked the entrance to Port Arthur," he said, "but on the following day the Russian Fleet came out. . . . We then laid a new barrier without sparing material or labour; but

¹ See Schoultz, p. 284, ff., for details. Compare Jellicoe, *Crisis*, p. 165 ff.

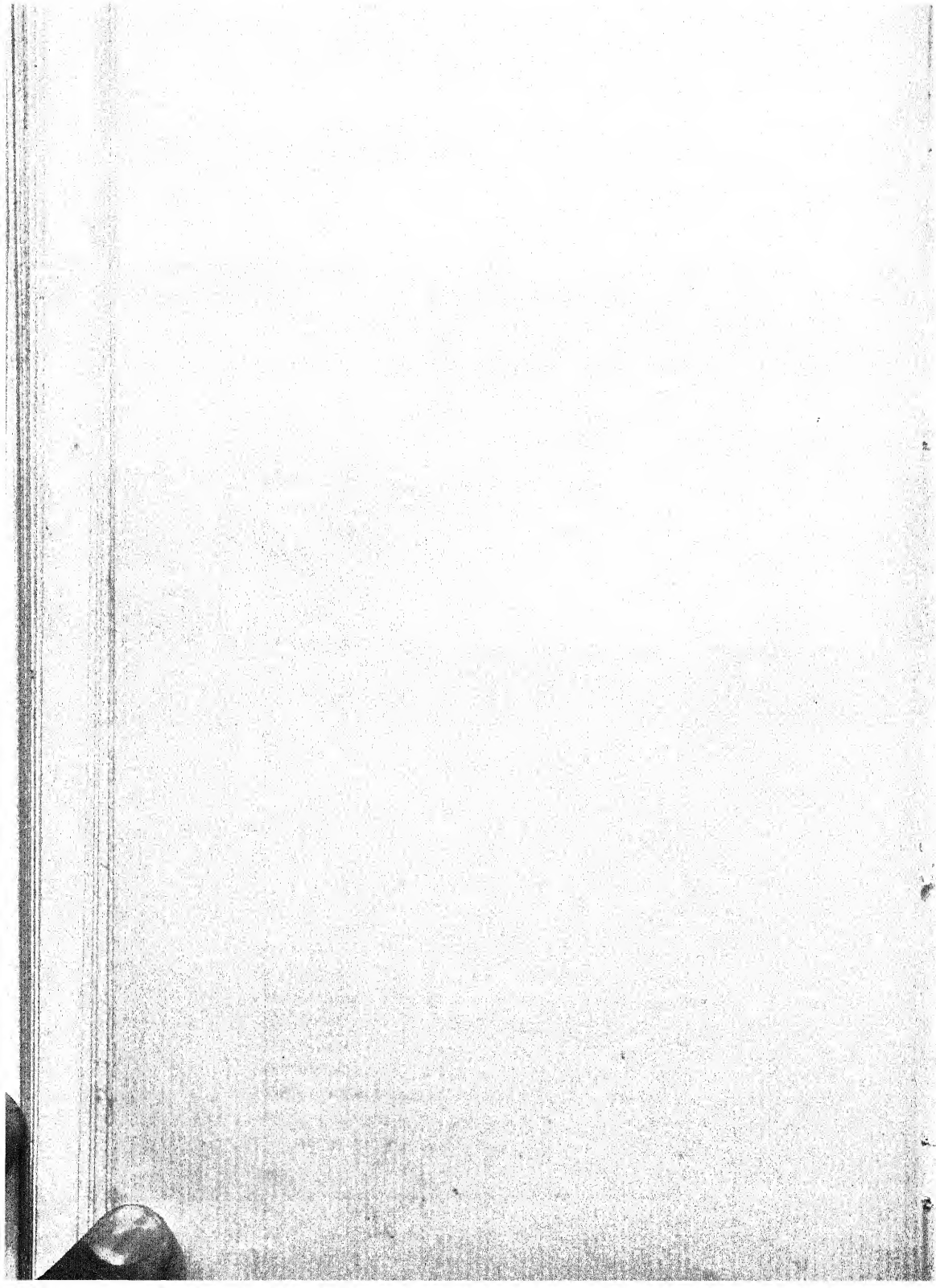
² Jellicoe, *Crisis*, p. 193.



PLAN 39

[p. 204

The North Sea as it was towards the close of the war, with the mine fields. Some of the Allied Minefields shown had originally been German and were utilised by the British. A swept passage was kept clear close under the British coast, but is not shown. Distances are in sea miles.



again the Russians swept the channel and put to sea as though there was nothing in the way; and so it went on month after month."

The French representative was convinced that long barriers, whether of nets or mines would never be effective. The decision reached seems to have been in favour of an enormous manufacture of mines, in order to lay barrages off the German coast while maintaining in efficiency the barrages that then existed. Schoultz, however, representing opinion in the Russian Navy, pressed the importance of forcing the German surface fleet to come out and engage the Grand Fleet. "Once the enemy fleet is destroyed" he said, "all operations against enemy submarines become very much simpler." In fact the result of the German escape at Jutland was making itself more and more felt every day.

Schoultz proposed a policy of "threatening the Jutland coast as well as the northern narrows [presumably the Skager Rack is meant] and the sea communications with Scandinavia by means of persistent energetic demonstrations," which he thought would force the High Sea Fleet to come out and give battle. This opinion is in general accord with Tirpitz's view,¹ that "the English only needed to make a demonstration against our coast; by an attack on Borkum or Sylt, for example, they could easily force us to give battle. . . . We should have fought near our ports but against an overwhelming superiority and in waters which had been made specially dangerous and, therefore, risky to us." The plan thus appears to have been a sound one, but there is no trace of any large-scale British effort thus to force the German Fleet to come out, even when the Allied superiority in the North Sea was so enormous as to leave not the smallest risk of defeat.

All through the year British and German minelayers were busy mining in the North Sea, and with the steady improvement in the British mines the German losses from this cause rapidly increased. In April, 1917, in view of indications of activity on the part of German surface ships, a system of daily convoy was introduced for vessels crossing the North Sea to Scandinavia, protection being usually given by a couple of destroyers.² The German command obtained full details of the route taken by the convoy and the force employed in guarding it, and during the operations in the Gulf of Riga, despatched the BRUMMER and BREMSE (light cruiser mine-layers

¹ *Erinnerungen*, p. 320.

² Jellicoe, *Crisis*, p. 126 ff.

of 33 knots armed with four 5.9-inch guns) to attack it. The convoy was sighted early on October 17; it consisted of twelve vessels, mostly Scandinavian, in charge of the British destroyers *Strongbow* and *Mary Rose*. The British mistook the German ships for British armoured cruisers. The *Strongbow* was put out of action at the first salvo, before she could call up help by wireless; the *Mary Rose* suffered the same fate a few minutes later. The Germans then sank nine of the merchantmen. The loss of life in the British destroyers was 135, and would have been greater had not the little armed trawler *Elsie*¹ gallantly come to the rescue of the *Strongbow's* survivors at great risk to herself. At the moment of the action some sixteen British light cruisers were to the south, but they were not in visual touch and were unable to intercept the Germans on their retreat.

On October 24 this same convoy was attacked by a submarine and two of its vessels were torpedoed, one being sunk. On December 12 four large German destroyers (G 101, 103, 104 and V 106, each 1,250 tons and four 4.1-inch guns) caught the convoy at sea. It consisted of six steamers, in charge of the destroyers *Pellew* and *Partridge* (each three 4-inch guns) and four armed trawlers. The *Partridge* and the four trawlers with the six steamers were speedily sunk and sixty-nine men were made prisoners. The *Pellew* escaped covered by a squall of rain. This action illustrated once more the unsatisfactory quality of the British torpedo, as one which was fired by the *Partridge* hit V 106, but failed to explode and two others ran badly. It also demonstrated the defects of a convoy system which did not keep a strong fighting force in visual touch with the convoy, in waters where attack by surface ships in some force was always possible. The British cruisers arrived too late. Another German force of destroyers that same day sank a steamer on the Northumberland coast and also destroyed an armed trawler.

The consequence of these attacks was that stronger protection was given to the convoys. Instead of sailing daily, they sailed at intervals of four to five days, to relieve the strain on the Grand Fleet caused by the provision of a convoying force. In previous wars the attack on commerce had been countered by concentrating merchantmen in large droves and placing them under the protection of warships. As the escorting force increased in strength—eventually reaching one division of battleships from the Grand Fleet in addition to

¹ Chatterton, *Auxiliary Patrol*, pp. 221-2.

cruisers—the assailant was obliged either to cease his attacks or to come out and accept battle with his Main Fleet. So the battle of June 1, 1794, was fought by the French to protect a large convoy of food ships. Had the war continued, the protection of convoys in the North Sea might well have brought on a great naval engagement, if Scheer had been ready to support the operations of his commerce destroyers with the whole strength of his Battle Fleet and battle cruisers.

On November 2 a German decoy ship, KRONPRINZ WILHELM, was caught by the British destroyers in the Kattegat, and sunk. The British light forces were active in skirmishes with the German small craft engaged in mine sweeping, and here, as in the attack and protection of commerce, each side brought up larger and ever larger forces. On November 17 the battleships of the Grand Fleet moved out to the waters in which Jutland had been fought, supporting a sweep by battle cruisers and light cruisers into the Bight. The *Renown*, *Repulse* (each six 15-inch guns, 32 knots), *Courageous*, and *Glorious* (each four 15-inch guns, 32 knots) with eight light cruisers and a number of destroyers, sighted a squadron of German vessels engaged in searching and sweeping for mines, midway between Horns Reef and Terschelling. The German force consisted of some twenty small craft with ten destroyers, and four powerful light cruisers, supported by the two battleships, KAISERIN and KAISER. The weather was too misty for aircraft scouting. The British cruisers came suddenly on the German small craft, chased them southwards, and captured the patrol steamer KEDINGEN with sixty-four prisoners.

The action was chiefly important as showing the insufficient protection in the cruisers of the *Courageous* class, which suffered considerably from the fire of the German light cruisers, the accuracy of German gunnery and the unsatisfactory quality of the British projectiles. The British hit the KÖNIGSBERG with a 15-inch shell but the damage done was small. The Germans used smoke screens with good tactical effect to hide their weaker ships; the British light cruiser *Calypso* was hit on her conning tower, and her captain (H. L. Edwards) was mortally wounded. The action was broken off when the German battleships engaged and made one hit on a British cruiser. The British retired on the Grand Fleet while the Germans were reinforced by the battle cruisers HINDENBURG and MOLTKE. Only six hits (three with 15-inch shell) were made on the Germans whose

loss was 21 killed and 40 wounded; the British loss was about 100.¹ The results of this operation were more important than might have been supposed. The Germans were forced to give strong fighting support to their mine sweepers.

A disaster befell Tyrwhitt's Harwich Flotilla on December 23. Its destroyers regularly escorted a convoy to and from the Dutch ports; on this date the three destroyers, *Torrent*, *Surprise* and *Valkyrie* were sunk with a loss of 193 officers and men by mines which had been laid by one of the U boats. The mine field had been reported, but the destroyers, through one of these oversights which occur in human affairs, steamed into it.

During 1917 the Grand Fleet lost the battleship *Vanguard*, destroyed by one of those mysterious internal explosions which were so numerous in the war, at 11.20 p.m. in Scapa Flow, on July 9. Of some 800 men on board only two survived and both were asleep in their hammocks when the disaster took place. The real cause was never ascertained. On December 6, 1917, the Grand Fleet was reinforced by four coal-burning United States battleships under Rear-Admiral Rodman (*New York*,² *Wyoming*,³ *Florida*,⁴ *Delaware*⁴) They formed the 6th Battle Squadron in the Grand Fleet, and gave it an overwhelming superiority in force. In February, 1918, a fifth battleship, the *Texas*, sister to the *New York*, was sent to act as a reserve. These splendid vessels co-operated with the utmost efficiency in all the work of the Grand Fleet battleships.

In 1917 great changes were made at the British Admiralty with the object of relieving the congestion of work and developing the Staff, so as to secure a more energetic prosecution of the war at sea. The First Sea Lord was still burdened with some 1,500 telegrams and communications a day owing to excessive centralisation of authority. In September, Vice-Admiral Sir R. Wemyss became Deputy First Sea Lord with the task of supervising naval operations abroad; on December 26 he succeeded Sir J. Jellicoe as First Sea Lord, and the First Sea Lord was freed from all the routine work of administration and at last given time to deal with questions of policy. The operations and maintenance departments

¹ Schwarte, *Grosse Krieg*, iv, p. 119. The number of hits given by him differs from Scheer's figures. See also Schoultz, pp. 322-3.

² Ten 14-inch guns.

³ Twelve 12-inch guns each.

⁴ Each ten 12-inch guns.

of the Admiralty were separated, as they had been in the Napoleonic wars. The new Admiralty determined on vigorous measures to close Ostend and Zeebrugge and thus to deprive the Germans of their bases close to the Channel. On January 14, 1918, German destroyers fired a few shells into Yarmouth and killed six persons.

At Dover the efforts of Keyes had made it extremely difficult for U boats to pass the British barrage, which was protected by trawlers and destroyers showing searchlights and burning flares and fixed lights at night. These vessels were supported by monitors and attacked the submarines which had to choose between the alternatives of being sunk by gun fire on the surface or by the deep mines if they dived. In the early weeks of 1918 U 93, 95 and 109, UB 35 and 38, and UC 50 were destroyed in these waters. Scheer therefore decided on an operation to break the barrage and for that purpose sent from Wilhelmshaven the 2nd Flotilla, composed of the eleven largest destroyers (vessels of 1,200 to 1,400 tons, each armed with four 4.1-inch guns). One of the eleven had to be sent back from boiler defects; the other ten early in the morning of February 15, 1918, separated into two sections off the Sandettie Bank (thirteen miles north of Calais). One section struck at the west end of the barrage and the other at the east end, near the French coast.

The night was intensely dark and moonless. From the British point of view everything went wrong; the Germans were taken for British destroyers and the alarm was not given. Seven drifters and one trawler were sunk and four small vessels damaged. Once more the British fishermen in the small craft fought to the last and suffered cruelly, losing 60 killed. The German destroyers were sighted, retreating, by British destroyers, but were again mistaken for British; and the German Flotilla escaped without a single casualty, though G 102 after the raid, on approaching Zeebrugge struck a British mine and was damaged with a loss of three killed. A few days later the British losses were repaired and the watch on the channel was maintained with splendid vigilance, so that its passage became quite impracticable for U boats.

On March 21 a number of small German torpedo craft attempted a fresh raid on the Channel barrage, but were caught and attacked by the British flotilla leader *Botha* (two 4.7-inch and two 4-inch) the British destroyer *Morris* (three 4-inch) and the French destroyers *Bouclier*, *Magon*

and *Mehl* (two 4-inch each). The *Botha* rammed and cut clean in two a small German destroyer with so slight a shock that her own bow was not even marked; a second was torpedoed and sank.¹ The *Botha* herself was hit by a torpedo, but was towed back to port and repaired. The German operation was in concert with the general offensive which Ludendorff was then opening in France. Had it been on the largest possible scale the risks to the Allies would have been tremendous, as in the week following the German break through the British front, 200,000 British troops were moved across the Channel.

On April 23 the first carefully organised attempt was made by the British to block Zeebrugge and Ostend by sinking ships filled with concrete in the narrow entrances to these ports. Five old cruisers were specially prepared; and a sixth, the *Vindictive*, was specially equipped with flame-throwers, 7.5-inch howitzers and gangways, for the task of carrying a storming party to the huge curving mole at Zeebrugge in which she was to be aided by two Liverpool ferry boats, the *Iris* and *Daffodil*. This mole was connected with the land at the shore end by an iron viaduct, which was to be blown up by two old submarines of the C class, laden with high explosives. The attack on the mole was to be a diversion, in order to occupy the attention of the Germans, while three blockships steamed in and sank themselves in the channel. At Ostend two blockships were to sink themselves in the centre of the channel. To cover the operations the German defences were to be heavily bombarded by monitors; a thick smoke screen was to be put down; and strong air co-operation was arranged.

The total force that was to be engaged in this desperate venture numbered seventy vessels of varying speed and diverse qualities. Special conditions of wind and sea were necessary for success, and twice the fleet started and was compelled to return by unfavourable weather. On April 22, 1918, the eve of St. George's Day, it once more set out. Every preparation had been made for an undertaking, the most formidable that can be conceived, against a thoroughly fortified port held by adversaries who were on the alert and equipped with every imaginable defensive device. The ships and men had rehearsed their part and tested every detail under the supervision of Admiral Keyes, who planned the attacks at Ostend and Zeebrugge simultaneously for midnight

¹ See Coxon, *Dover During the Dark Days*, p. 90 ff.

of the 22nd-23rd. The night of the 22nd was hazy and overcast. The tide was high with the heavy swell of a gale that had just passed, leaving a choppy sea near the coast; the wind was light and in the right direction to blow the smoke, when the screen was put down, in the eyes of the German gunners. As slight rain was falling it was not a night on which aircraft could operate with any prospect of success, and therefore the powerful British Air Force took no part in the attack.

The time-table was punctually carried out. As the *Vindictive* worked up to full speed, which in her case did not much exceed 15 or 16 knots and must have been less that night since she was towing the *Iris* and *Daffodil*, Keyes made her by semaphore the signal, "St George for England," and her captain, A. F. B. Carpenter, replied with admirable spirit, "May we give the Dragon's tail a damned¹ good twist." She steamed without incident clear through the German mine fields, which by this time were well known, and the feat is interesting as it could hardly have been attempted before the adoption of the paravane in the British Fleet. The glare of a powerful German searchlight could be seen through the artificial fog and smoke which the British coastal motor boats were spreading to cover the *Vindictive's* approach. Suddenly, however, there came a shift of the wind so that it blew offshore. But the artificial fog was so thick that nothing could be seen. The German gunners were on the alert when the smoke lifted: at that moment the mole loomed up and every German gun that would bear opened; and star shells went up lighting up the scene. The *Vindictive* replied with her battery in the steadiest fashion.

Through a hail of projectiles which ought to have sunk his ship four or five times over, Carpenter, standing out on the bridge, drove the *Vindictive* to the mole; laid her alongside it; ordered the starboard anchor to be let go and when it caught on some obstruction dropped the port anchor and signalled to the *Daffodil* to thrust the *Vindictive's* hull in by butting against it. The *Iris* went ahead to grapple the mole. In the swell the ships rolled a good deal and crashed heavily against the mole.

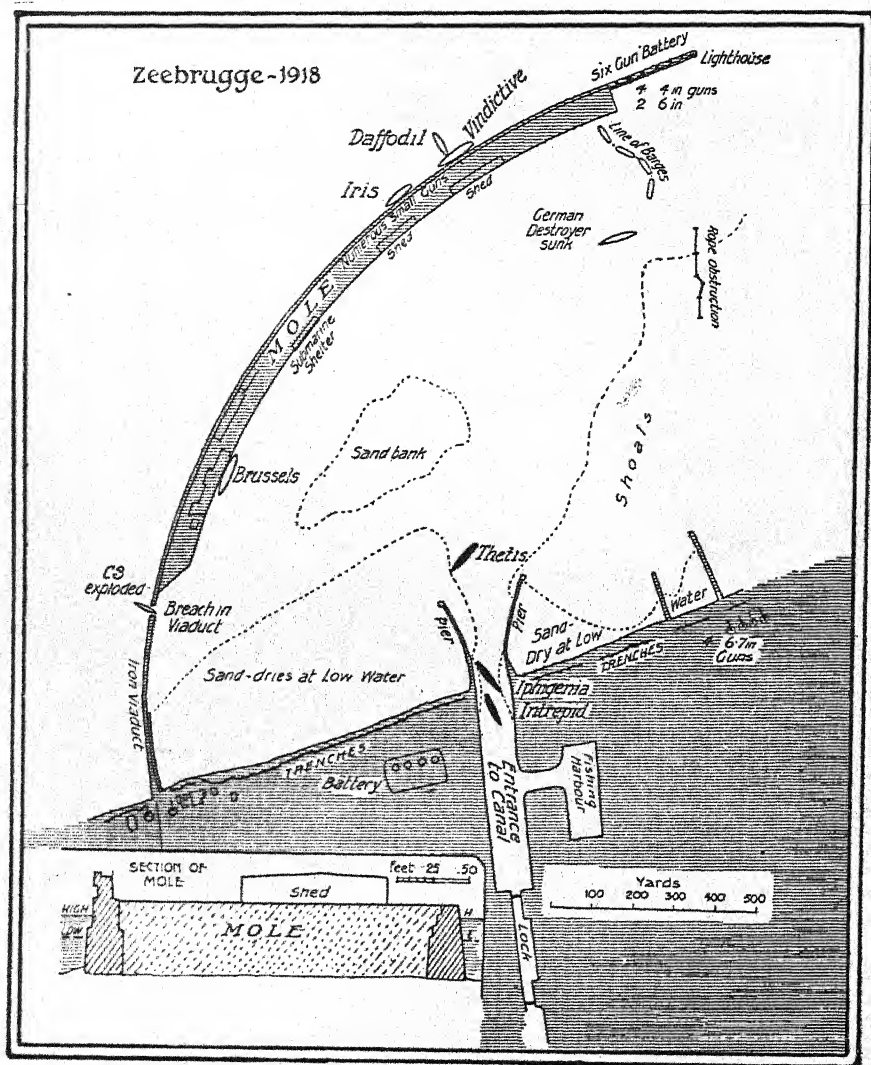
The large flame-throwers which the *Vindictive* carried were almost immediately put out of action; it was a task of

¹ The signalman spelt it "darned," for the new navy did not love strong language.

great difficulty and danger apart from the hostile fire, to mount the long narrow swaying gangways which led from the ship's deck up to the parapet of the mole. But up those gangways, or such of them as were not shot away, the storming parties of seamen and marines moved with magnificent steadiness, heavily laden with bombs, machine guns, demolition charges, steel helmets and gas masks. The struggle on the mole was furious as the British strove to force their way in either direction along it from the point where they had made their landing. In the movement towards the shore end they swept through a barbed wire entanglement with machine guns mounted beyond it, and drove the Germans right back. Meantime in the *Vindictive* every man on the conning tower platform was killed or wounded, so heavy was the German fire upon the ship.

While the fight was proceeding on the mole, Lieutenant C. S. Sandford in submarine *C 3* with five picked volunteers under him drove that boat up against the pilework of the viaduct at the shore end of the mole. The boat was the target of many German rifles but it was not touched, perhaps because the Germans hoped to capture it undamaged. As its crew drew close to the viaduct they could hear German soldiers and marines shouting at them and firing. *C 3* had with her a small motor boat for escape. Sandford lighted the fuse which was to burn six minutes before it exploded the powerful charge in the submarine's bow, but almost at once the propeller of the motor boat broke. He and his five men were consequently only about 200 yards away when the explosion took place, and a shower of fragments, splinters and masses of concrete fell on them. Every one of the six was wounded, and it seemed that their loss was inevitable when they were picked up by a boat from the fleet. The second submarine was delayed by the parting of a towing hawser and when she reached Zeebrugge, met the *Vindictive* and the fleet retiring. In any case her services were not required, so thoroughly had *C 3* done her work.

Round the seaward end of the mole into the sheltered water beyond, two British coastal motor boats, *CMB 5* and *CMB 7*, dashed and attacked the German small craft which were lying inside, thus effectually diverting their attention. They were followed by other boats and by the destroyer *North Star* which was disabled by German shells. In the midst of all this turmoil the three blockships *Thetis*, *Intrepid* and *Iphigenia* steamed in almost unobserved towards the



PLAN 40

[p. 212

THE BLOCKING OF ZEEBRUGGE

The blockships are shown in the approximate positions where they were sunk.



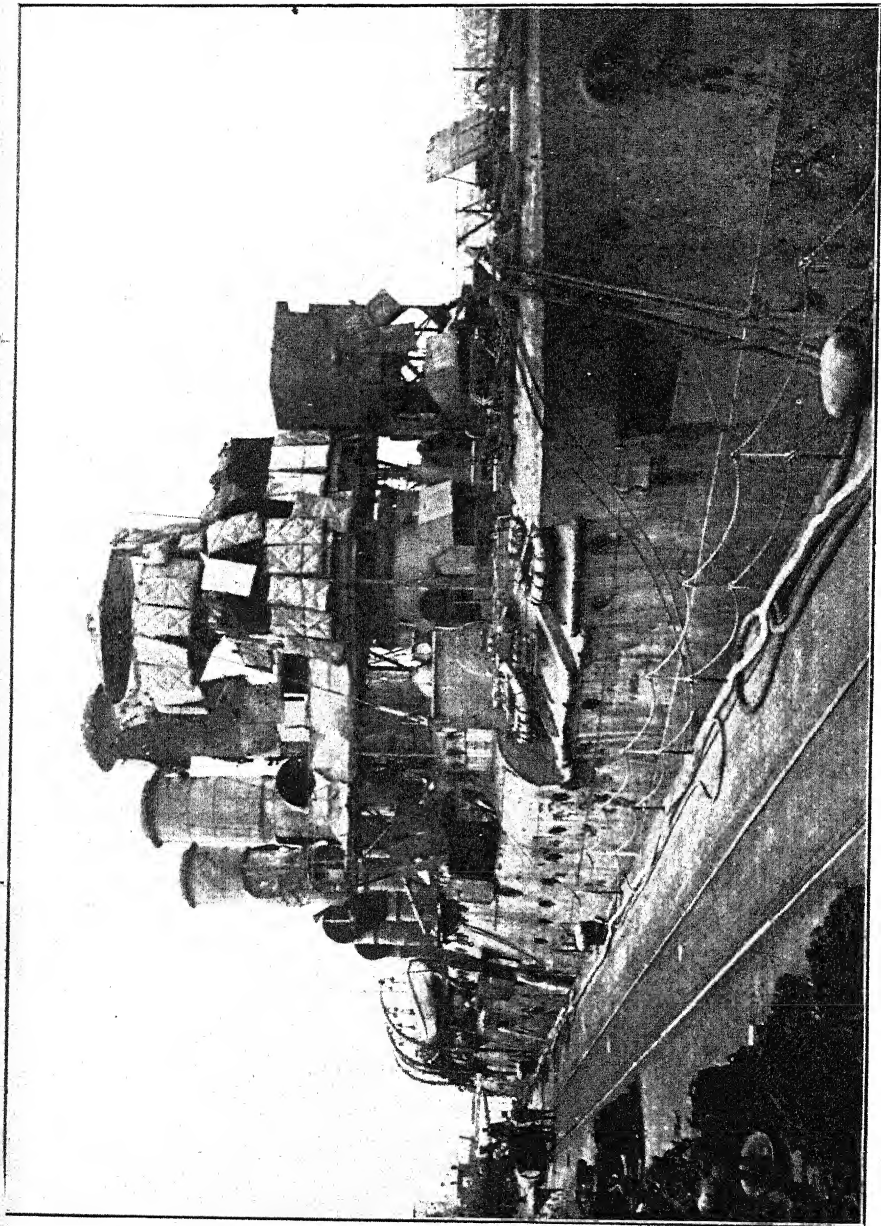


PLATE 42

THE BLOCKSHIP "VINDICTIVE" AFTER HER RETURN FROM ZEEBRUGGE
The illustration shows clearly the damage caused by the German fire. The splinter-screen used to protect the officers and men on the bridge are very noticeable, as also the injuries to the funnels. The square structure to the right of the conning-tower contained a large flame-thrower.

entrance of the Zeebrugge canal, and not until they were extremely close to their objective did the German fire on them become serious. All the while Carpenter had held the *Vindictive* against the mole—for some twenty minutes, according to the time-table. Then he cast off and had to face extraordinary peril, as the Germans had now all their batteries in action and their shooting was excellent. Nevertheless the *Vindictive* still floated, and carrying with her a quarter of a ton of masonry from the mole, she presently vanished from the view of the Germans in the smoke screen. For the admirable conduct of all in her she was honoured by Keyes with the signal, "Well done, *Vindictive*!" As for the destroyer *North Star*, repeated and most gallant attempts were made by the destroyer *Phæbe* to tow her off, without success, and she was finally abandoned in a sinking state and her crew removed.

Of the blockships at Zeebrugge, the *Iphigenia* and *Intrepid* were successfully sunk in the canal entrance in the exact position intended. The *Thetis*, however, from one of her propellers fouling a net, had to be sunk just outside the channel. So well was the work done that the canal was blocked for a time for submarines and for all but the smallest vessels. Neither of the blockships was removed before the Germans were forced to evacuate Zeebrugge. The blocking operation at Ostend was conducted by Commodore H. Lynes, but it failed owing to wind which lifted the smoke screen and the fact that the Germans had moved a buoy a mile to the east on the eve of the attack. The two blockships, *Sirius* and *Brilliant*, had to be blown up before they reached the entrance. The British loss was heavy, 189 killed or mortally wounded and 383 wounded, while 16 men were missing. The destroyer *North Star* was sunk in addition to two motor launches; three German destroyers or torpedo boats were claimed by the British as having been put out of action, but only one appears to have been actually sunk and her wreck was long visible. The gallantry and determination of the Navy at Zeebrugge made a deep impression at an hour of singular anxiety in the war.

In the night of May 9-10 Keyes repeated the attack on Ostend, using the *Vindictive* as a blockship. She had been filled with cement and she was taken successfully into the channel and sunk there with a loss of only 8 killed, 11 missing and 30 wounded. One motor boat was also lost. Even then the entrance was not permanently obstructed. The Germans

were able to move the vessel slightly, so that a narrow passage remained, but as at Zeebrugge it could only be used with a good deal of difficulty.

The operations at Zeebrugge and Ostend remain the only blocking operations that have been carried through with relative success. They are, therefore, of great historical importance. The difficulties of the assailants were increased by the hydrographical conditions of the Belgian coast, which is a mass of sandbanks, shifting constantly, and in April, 1918, was without any navigation marks that the British Fleet could safely use. The German mine fields were in thorough order, so far as such obstacles ever can be. The batteries ashore were numerous and mounted the heaviest and most modern guns with the latest appliances for good shooting. The points to be reached by the blockships were exceptionally hard of attainment under a heavy fire. Yet they were reached by poorly protected vessels, through the amazing gallantry of the British officers and men concerned in the attacks. One of the surprises was the impunity with which small motor craft were able to dash in right under the muzzles of heavy German batteries, and, untouched, lay out blinding smoke clouds.

In April, 1918, Scheer determined to move out in force to attack the Allied vessels engaged in protecting the Scandinavian convoy, fixing April 24 for the date of his operation. Wireless silence was enjoined in his ships. The intention was to fall on the convoy with the five battle cruisers, (HINDENBURG, DERFFLINGER, SEYDLITZ, MOLTKE, VON DER TANN), the four best light cruisers and the eleven fastest destroyers, while the rest of the German Fleet remained ready to give support. A protective mine field was laid by the Germans as a preliminary, running north and south 70 miles west of Horns Reef. On the 23rd the fleet put to sea, but next morning the MOLTKE completely broke down, from the loss of a propeller and the collapse of a turbine.¹ With 2,000 tons of water in her she had to be towed back. Hipper, however, went north as far as the supposed route of the convoy and found nothing though at that very moment thirty-four vessels of the convoy were nearing the Forth, and the outward bound convoy with over forty vessels was getting ready to leave the Forth. On her way into port the MOLTKE was hit by E 42 with a torpedo amidships, but once more the unsatisfactory character of the

¹ Schwarte, *Grosse Krieg*, iv, p. 125. According to other accounts she struck a British mine west of Stavanger. (Kirchhoff, p. 385.)

British torpedo was demonstrated. She got back to port under her own steam, after the leak caused by the turbine and propeller breakdown had been stopped. This was the last expedition which the High Sea Fleet made. As one result of this affair the route of the convoy was moved further north.

When the movement of United States troops began on a large scale in the spring of 1918, precautions had to be taken against a raid by German battle cruisers or battleships. The watch in the North Sea was carried out with redoubled vigilance, and as an additional safeguard three United States battleships of the most powerful type were moved to Queens-town, where they were able to escort the convoys through the zone in which attack by German surface ships was most to be feared. But the Germans never moved.

Two British air attacks were made with success in the summer of 1918. On July 19 the aircraft carrier *Furious*, escorted by the five new battleships of the *Repulse* class and a large destroyer force, steamed to Sylt, and there seven Sopwith Camel aeroplanes flew off her deck to bomb the Tondern airship sheds. Two large double Zeppelin sheds were destroyed with the airships L 54 and L 60. The British loss was five machines, and one pilot killed. On August 11 a Sopwith Camel aeroplane flown off a lighter which was towed by warships, brought down the airship L 53 in flames, without any British loss. These two brilliant operations were important as showing that German airships could no longer scout with safety even in the Bight.¹

During 1918 a plan was prepared by the German Naval Staff for striking a great blow against the Grand Fleet. The idea was to draw it far south, by a movement in force of the High Sea Fleet towards the mouth of the Thames and the Straits of Dover, and then to attack it with the whole available strength of the German submarine flotillas. A part of the project was the laying of a vast system of mine fields in the North Sea and off the British bases, and off Rosyth in particular. In general outline, the plan was known to the British Staff, and ample precautions were taken against its success.

The German mine fields were located as fast as they were laid, and were either swept up with the enormously improved methods of sweeping introduced late in the war, or were used as part of the British defensive system. Thus when after the Armistice the German Navy notified (as it was required

¹ The German airship wastage was enormous. Of sixty-one Zeppelins assigned to the Navy, only ten remained effective at the end of the War. (Scheer, p. 203.)

to do) the position of a new field running from the Bell Rock down the North Sea, it was informed that the field had already been swept up, so far as it was convenient for the British command. Had a collision between the fleets taken place, the British strength with one American battleship division was more than two to one; the weak points in the British ships had been strengthened; the risk of flash had been eliminated; new shells of a most formidable type had been substituted for those which had failed at Jutland; and the rapidity of fire had been markedly augmented.

After the German Government had lost heart and determined on peace, the heads of the German Navy in secret ordered the prosecution of the offensive, which (it was fondly believed in Berlin) would come quite unexpectedly for the British. At the end of October the Grand Fleet was ready and waiting to strike such a blow as Togo inflicted at Tsushima. On October 28, the High Sea Fleet was ordered to put to sea. All the available U boats were massed in the North Sea to assist the German surface ships. But the odds were now so gigantically against the Germans that the crews of the fleet lost heart. A mutiny broke out in the THÜRINGEN, HELGOLAND and certain of the battle cruisers when the order was issued to prepare for battle, and as the result the idea of taking the offensive was abandoned. Orders were given to sink mutinous ships, but they were not carried out and the whole fleet became infected. Had it put to sea and given battle the result must have been its destruction and the purposeless slaughter of tens of thousands of men. For the war was now lost beyond any hope of retrieval. On November 9 William II lamented that he had "no longer a Navy."

Some attempt was made by the German Navy in the later years of the war to attack Allied commerce with surface cruisers. The MÖWE once more succeeded in escaping from the North Sea on November 24, 1916, and after destroying several ships, sent in one of her numerous prizes, the YARROWDALE, which evaded the British patrols on December 31, with 469 prisoners from the crews of ships sunk. She sank twenty steamers and three sailing vessels besides the YARROWDALE, which she captured, with a total displacement of 123,000 tons; and she returned to Kiel on March 20, 1917. A second commerce-destroyer, the WOLF, in November 1916, stole out along the Norwegian coast and proceeded by Iceland into the Atlantic, laying mines off important Allied coaling

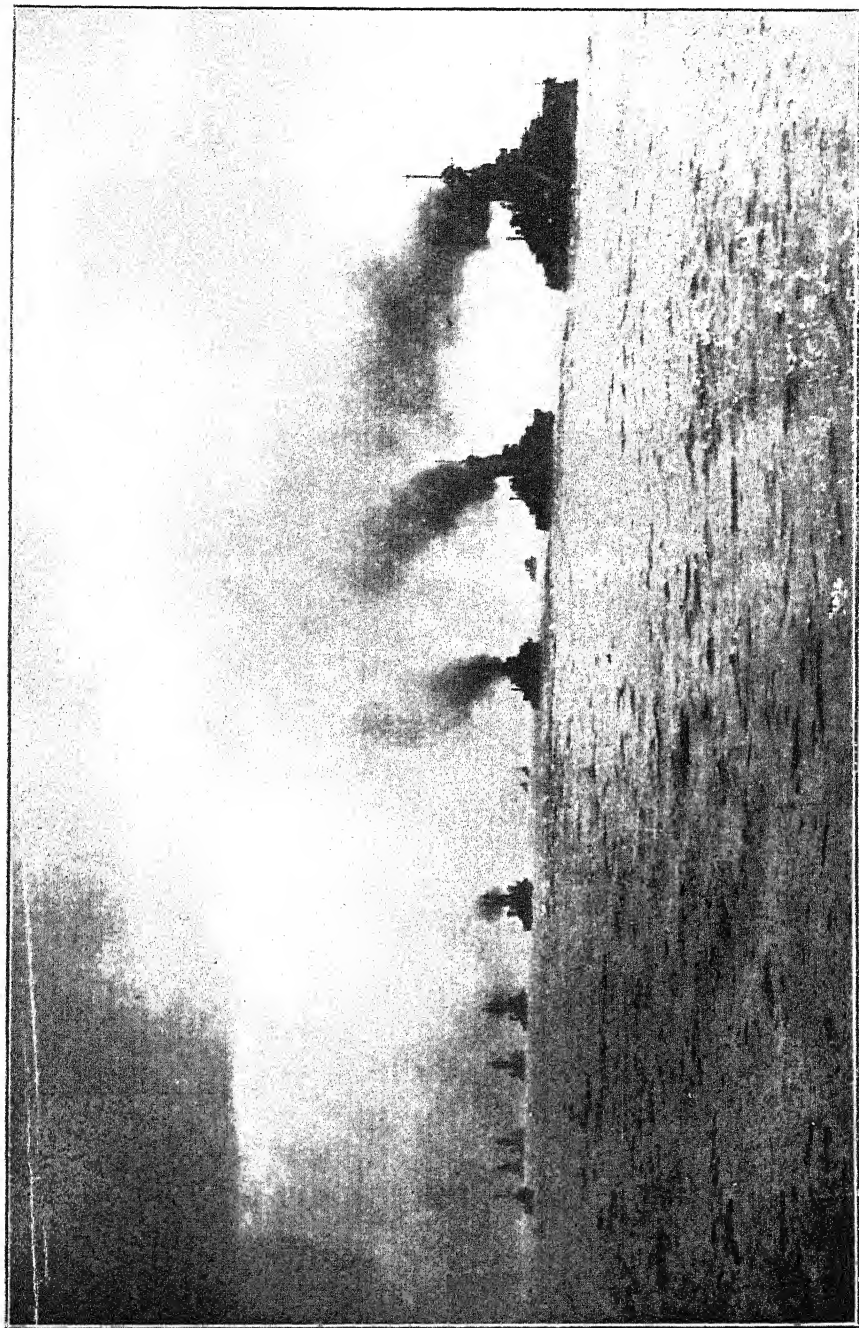


PLATE 43

Battleships of the Grand Fleet in line of battle at sea exercising. Of peculiar interest, as five United States battleships are steaming with the British: the American type of basket mast can be plainly made out in them—the last five ships in the line. The small vessels are destroyers, screening.

stations on the way. Thus she laid mines off the Cape of Good Hope, in the Gulf of Aden, off Bombay and Ceylon, on the Australian coast, and between the North and South Islands of New Zealand. For many weeks she remained in a remote land-locked harbour in the Kermadec Islands,¹ and used a seaplane, which she carried, to reconnoitre. After laying a few mines off Singapore, she returned to a German port on February 18, 1918, having destroyed or damaged 210,000 tons of Allied shipping. Fourteen vessels were captured by her and destroyed and six or seven damaged on the mines she laid.

This promiscuous mine-laying in waters remote from the scene of war was a cruel practice which meant great danger to neutrals and had little effect on naval operations. A tender, the *TURRITELLA*, which the *WOLF* seized and fitted out, sank herself to escape recapture. A third commerce destroyer was the *SEEDLER*, a sailing vessel with an auxiliary motor. She got to sea on December 21, 1916, with counterfeited neutral papers, after being stopped by a British patrol, and operating in the Atlantic captured and sank for the most part thirteen vessels, four of them steamers. She then sailed to the Pacific where she sank three United States schooners, but was herself wrecked in the Society Islands on August 1, 1917. Yet another German commerce-destroyer, the *LEOPARD*, (ex-YARROWDALE) was caught in the North Sea by the British armoured cruiser *Achilles* and boarding steamer *Dundee* and was sunk before she could do any mischief, in March, 1917.

¹ North of New Zealand.

CHAPTER XXVIII

The U Boat War—Its Growing Brutality—Hospital Ships Attacked—Enormous Allied Losses—U Boat Merchantmen—U Boats Reach America—The Ruthless Campaign Begins—Rapid Increase of Tonnage Sunk—Patrol or Convoy?—Crisis Caused by Mr. Wilson's Hesitations—Success of the Convoy System—Sinking of the "Justitia"—German Submarine Cruisers—New Barrages and New Mines—British and German Submarine Losses—More than One Third of British Shipping Destroyed.

IN a previous chapter the record of the submarine war was brought down to May, 1916.¹ The salient characteristics of that struggle as it proceeded were the rapid increase in the range of the submarines on either side, in their ability to make long distance voyages and remain at sea for long periods, in their menace to surface ships, and in their power to bombard coast towns. On the German side this war was waged with growing brutality and disregard for neutrals, careless of the risk which the German Ministers endeavoured to impress upon the naval leaders, that such methods would bring neutrals into the war on the Allied side. The German Navy and its Staff, on a dispassionate survey of conditions must, therefore, be regarded as mainly responsible for the German defeat.

They forced Mr. Wilson, whose anxiety to remain neutral was notorious, to fight much against his wish; and everywhere they stirred up feelings of the deepest passion against their U boat crews. Many of the commanders behaved with humanity, and wherever there is evidence of such conduct on their part, it has been emphasised in this work. But a minority disregarded the laws of naval war and displayed a barbarity of which civilised men before this gruesome

¹ See p. 105, and appendix at the end of this chapter (p. 233).

struggle had not been thought capable. Nor can the German Government escape blame. It encouraged attacks on Belgian relief ships, sailing with German safe conducts, and it ordered attacks on hospital ships. A message from Count Luxburg, the German representative in the Argentine, to the German Government was intercepted by the British in July, 1917, urging that Government to "sink without trace" certain neutral vessels.¹ It is a misfortune for the whole world and not least for Germany herself that these deeds have passed entirely unpunished. Where there is no atonement or repentance there can be no real forgiveness.

Acts for which it is impossible to find any excuse multiplied, such as attacks on hospital ships and firing upon crews and passengers of submarined ships who had taken to the boats. So many instances are known in which even neutrals were thus treated that it must be regarded as a common practice. In the case of the *Belgian Prince* submarined on July 31, 1917 200 miles from land, forty-one of the crew were ordered to the deck of the submarine, U 44, commanded by Lieut.-Commander P. Wagenfuhr²; their life belts were taken from them; they were stripped; and their boats were smashed. The submarine then submerged, leaving the forty-one men to drown. By an extraordinary chance three were picked up alive to tell the tell. Wagenfuhr perished with his U boat and all on board on August 12, 1917. In August, 1917, the International Conference of Merchant Seamen drew up a list of ten well authenticated cases (five neutral) in which German U boats had deliberately fired on men escaping in boats.

Attacks on hospital ships in 1916 began to occur more and more frequently; on November 21, 1916, the *Britannic* was sunk in the Aegean and fifty of those on board were killed by a submarine; on November 23 the *Braemar Castle*, with wounded on board, was hit in the same waters.³ It is possible, however, that the *Braemar Castle* struck a mine and was not actually assailed by submarines. In January, 1917, the German Government announced that its submarines would sink hospital ships in the war zone, on the pretext that they were used for the transport of combatants and munitions. The British Government immediately replied

¹ Thirty-seven neutral vessels are known to have been "sunk without trace" about July and Aug., 1917, but probably half of them were destroyed by mines.

² Michelsen, p. 57, describes him as a "hero." See. Garner, i, pp. 381-2, on this deed which he characterises as "atrocious."

³ Hall, *Law of Naval Warfare*, p. 109. Garner, i, p. 507.

denying the charge and pointing out that the proper course to take, if suspicion was entertained, was to visit and search the hospital ships. None the less on March 20 the *Asturias* was torpedoed when forty-three persons, including one woman nurse, were killed, and on March 31 the *Gloucester Castle* was torpedoed, but not sunk. These ships were steaming with full navigation lights and with the international marks brilliantly illuminated. It was clear that the danger of the sick and wounded was increased by the use of the distinctive lights and marks, and they were consequently abandoned in most cases. On April 17 the hospital ships *Lanfranc* and *Donegal* were both sunk with a loss of seventy-five drowned, among whom were fifteen wounded German prisoners.¹ Both vessels were convoyed by destroyers and one of them was without the marks of a hospital ship. On May 26 the *Dover Castle* was sunk and seven men were killed by UC 67 (Lieut.-Commander Neumann).

The French authorities at once retaliated by placing German officer prisoners on board their hospital ships in the Mediterranean, to which the Germans replied by exposing triple the number of French officer prisoners to danger in the war zone on land. The British Government took no action, though reprisals may sometimes be effective as a deterrent.² On September 10, 1917, the German Government agreed to abstain from attacks on hospital ships in the Mediterranean if a Spanish naval officer was carried to see that the Hague regulations were strictly obeyed; but outside the Mediterranean the savage war on wounded and dying was maintained. Four hospital ships were torpedoed and sunk in 1918—the *Rewa* on January 4, the *Glenart Castle* on February 26, the *Llandoverly Castle* on June 27, and the *Warilda* on August 4 (with 123 killed) while torpedoes were fired unsuccessfully at the *Guildford Castle* on March 10. The *Rewa* was brilliantly lighted and was carrying the regulation marks. In the case of the *Glenart Castle* and *Llandoverly Castle* there were circumstances of peculiar atrocity. Of 182 persons on board the *Glenart* only twenty-two were saved, and examination of the boats afterwards recovered showed that they had probably been fired upon by the submarine while in the water. In the case of the *Llandoverly Castle*, 234 persons were drowned and only twenty-four saved;

¹ There were 167 German wounded on board them; 152 were rescued by the British at great risk.

² Cf. the British Official *Manual of Military Law* (1914), p. 304. Garner ii, p. 49 ff.

the submarine (U 86, Lieut.-Commander Patzig) deliberately fired on the boats and thus slaughtered a number of women nurses and medical officers.¹ Two of the German officers engaged in this crime were afterwards tried by the Leipzig tribunal under the provisions of the Treaty of Versailles. They were convicted when the charges against them were clearly proved, but only sentenced to a trifling term of four years' imprisonment, and they were allowed almost immediately after the trial to escape. Patzig was promoted after his deed and eluded arrest and trial.

The merchant shipping, Allied and neutral, sunk from April, 1916, to the end of January, 1917, when the ruthless war began, was as follows, in thousands tons net register:²

		World				World	
		British.	Total.			British.	Total.
May, 1916	..	64.5	129.1	Oct.	..	176.2	353.6
June	..	36.9	108.8	Nov.	..	168.8	311.5
July	..	82.4	118.2	Dec.	..	182.2	355.1
Aug.	..	43.3	162.7	Jan., 1917	..	153.6	368.5
Sept.	..	104.5	230.4				

The rapid rise in the losses in the autumn of 1916 is striking and is obviously related to the rapid increase in the number of submarines (from fifty-eight in May to eighty in September) and the growing skill of their commanders, while in October attacks on merchantmen were officially ordered. Down to the end of 1915 the Germans lost twenty-five U boats and completed sixty-three, so that they gained on balance thirty-eight; in 1916 they lost only twenty-two and completed 108, so that they gained on balance eighty-six boats, and had by the end of 1916 97 U boats in service as compared with twenty ready at the outbreak of the war.³

The growing violence of the U boat campaign produced cumulative effect. Each ton sunk as the war went on made more impression. To some extent the loss was replaced by new construction, but this absorbed labour and material which was needed for the field or for munitions, in a war where all the nations were fighting with all their available man power; to some extent the depredations on shipping could be met by a strict rationing of tonnage and cutting off luxuries, though there was an obvious limit to such measures. A source of additional loss, however, which was consequential on the

¹ Mullins, *Leipzig Trials*, p. 99 ff.

² Fayle, iii, p. 465. For continuation of this table see p. 224 in this chapter.

³ Michelsen p. 183 and 186, and Table XXIX.

campaign, was the delay caused by zig-zagging or following roundabout routes. Thus, between Gibraltar and London one steamer covered 2,560 miles instead of the normal 1,313.¹ Besides this, vessels were often detained in port owing to the proximity of a submarine.

The plan of diverting vessels from the time-honoured routes no longer gave satisfactory results; the English Channel was once more infested with U boats; and no remedy was in sight. The arming of all merchant ships defensively was ordered by an inter-Allied Conference on December 7, 1915, and it afforded some measure of protection; but neutrals in this hour of tremendous danger to the Allies imposed severe restrictions on such armed ships,² which were always treated by the Germans as warships and attacked and sunk without notice. In the last quarter of 1916, of 206 ships attacked, 118 were armed and 88 were not; of those armed 38 were sunk and 80 escaped; of the unarmed vessels 60 were sunk and 28 escaped. By the close of 1916 the British merchant service had suffered the terrific loss of 2,400,000 tons due to German action; and, allowing for German ships seized and new British ships built, the British tonnage had fallen by 750,000. And this in addition to the enormous demands made upon it for various war purposes. A crisis in the war was plainly approaching.

The navies which commanded the surface seemed powerless against their underwater assailants; the conditions of naval warfare had been transformed, and the British with defective mines, inferior torpedoes and a lack of efficient airships for North Sea scouting, were at a great disadvantage. Their lines of communication passed oversea and were intensely vulnerable to the submarine assailant; the German lines of communication passed overland and were safe from everything except air attack. The creation of the railway network had given land power facilities which had not existed in earlier sea wars.

The increasing audacity of the U boats and their growing range were illustrated by many events in 1916. In May U 39 bombarded Portoferraio in Elba and damaged the harbour works there. On July 11-12 a U boat shelled Seaham, and with an expenditure of thirty 12-pounder shells, killed a woman and caused some small damage. On July 9 the German submarine *DEUTSCHLAND* arrived at Baltimore from

¹ Fayle, ii, p. 381.

² Not until Mar., 1917, did the United States withdraw its objections to merchantmen carrying guns forward. Hall, *Law of Naval Warfare*, p. 57.

1916] "DEUTSCHLAND" REACHES BALTIMORE

Bremen after a voyage which had lasted since June 14.¹ She claimed to be a merchantman and brought mails and a cargo of 200 tons of dyestuffs, in exchange for which she shipped nickel and rubber. Her surface displacement was 1,500 metric tons, or submerged 1,870; her radius 13,100 miles at economical speed; and her maximum surface speed 12 knots.

She safely returned to Germany, and made a second voyage in October–November, 1916, but a similar vessel, the BREMEN, foundered at sea, probably from striking a British mine. The DEUTSCHLAND's voyage was of historic importance as the first one made by an unarmed submarine. It may have been intended as a reminder to Mr. Wilson that Germany's arm was a long one. A little later, on October 7, U 53 (Lieut.-Commander Rose) arrived at Newport in the United States. She was a vessel of the ordinary German type, of 720 tons on the surface, and an extreme surface speed of 17 knots. She covered a total distance of 7,750 miles without replenishing her supply of fuel and lubricant, though the nominal limit of her class was 5,200 miles.

British patrols had been withdrawn from the United States coast in deference to a complaint from Mr. Wilson that their action in protection of Allied commerce was "vexatious and uncourteous";² and the way was open for U 53. She communicated with the shore, obtaining particulars of British shipping in the neighbourhood, and then put to sea and sank close to the coast four British and two neutral vessels—one of these (Blommersdijk) on a voyage from one neutral port to another and not in the war zone as proclaimed by Germany. Rose was, however, a chivalrous officer with a reputation unstained by the crimes which some of his comrades committed. On December 3, U 38 (Valentin, one of the most merciless of the U boat commanders) boldly proceeded into Funchal harbour in the island of Madeira, sank the French gunboat *Surprise* and the French submarine depot ship *Kangaroo* with the British cable ship *Dacia*, after which he bombarded the town for two hours. U 38 seems to have been the submarine which, outward bound, attacked off the Portuguese coast the old French battleship *Suffren*, on November 26, and sank her with every soul on board (648 officers and men).

The German decision to sink everything on sight from February 1, 1917, involved no real change in the German

¹ Garner, (ii, p. 437), deals with the legal questions raised by this vessel.

² Garner, ii, pp. 443-4.

attitude.¹ Any vessel that submarines could destroy without extreme danger to themselves, had been destroyed for several weeks before this decision was announced. Its importance was mainly in this, that it was an act of open defiance and intimidation to neutrals, and above all to the United States. The German Government was entirely convinced that the war would be won, and quickly, by the ruthless submarine campaign.² The German Naval Staff in its memorandum of February 12, 1916, had declared that "an unrestricted U boat campaign will compel our enemy to make peace in at the very most six months." At the end of 1916 the Naval Staff advised that the introduction of the ruthless war early in 1917 would secure peace by May, or at the latest July, 1917. The chances of United States' intervention were weighed and all danger from it dismissed by the German General Staff, which was assured that the tonnage would not be available for the transport of any considerable force, even though a large United States Army was created, and that the war would be decided before such an army could be raised. The German threats had considerable effect on the weaker neutrals, as Holland, Denmark and Sweden determined as far as possible to keep their merchant shipping in port until they saw what the German submarines would do. Thus by a mere menace a large neutral tonnage was withdrawn, though only for a time.

With this decision to sink everything mercilessly, the war at sea entered its supreme phase. Now at last was life or death for the British nation at stake. The statistical conditions are shown by these figures giving in thousands of tons British and Allied and neutral shipping sunk from February onwards in 1917³:

	British.		World Total.			British.		World Total.	
Feb. 1917	313.4	..	540.0		Aug. 1917	329.8	..	511.7	
Mar. "	353.4	..	593.8		Sept. "	196.2	..	351.7	
April "	545.2	..	881.0		Oct. "	276.1	..	458.5	
May "	352.2	..	596.6		Nov. "	173.5	..	289.2	
June "	417.9	..	687.5		Dec. "	253.0	..	399.1	
July "	364.8	..	557.9						

The rapid increase in the tonnage sunk in the early months of 1917 was again largely due to the growing number of U boats,

¹ So the various zones of blockade proclaimed by Germany at various dates had minor importance because many U boats sank any vessel they could attack in any part of the sea.

² See Persius, *Seekrieg*, pp. 86-7.

³ For continuation of this Table see p. 230.

which rose from 103 in January to 128 in March, after which it changed but little, as the highest figure in the whole war was reached in October, 1917, with 140 U boats in service. The German output of submarines for the period July, 1916-June, 1917, inclusive, was 98 boats, an average of 8 per month, while the wastage was only 35 or three per month. The British average output of anti-submarine vessels was four to five destroyers and two submarines per month, out of which wastage had to be met (fifteen destroyers and six submarines in the twelve months).

Thus the forces of attack were increasing as fast as the forces of defence. The British output of new shipping in the last half of 1916 was at the rate of 57,000 tons a month, and in the first half of 1917 at the rate of 82,000 tons. Only a fraction of the tonnage destroyed was being replaced, and the German Navy was winning the war.

The method of protection adopted in February, 1917, was that of patrolled routes, watched by trawlers, sloops, and any destroyers that were available. When a hostile submarine was located by directional wireless (as the German U boats constantly used their wireless at sea) vessels were ordered to avoid her locality. But the system of patrol had grave defects.¹ It was purely and passively defensive. It absorbed an enormous number of vessels, and as the routes were seldom changed it helped the U boat commanders to ascertain where victims would be met. The U boat's tactics were first to show itself at some point where patrols were observed, and then to dive and go elsewhere while the surface craft were hunting for it at the place in which it had shown itself. Later in the submarine campaign such methods became more difficult with the development of the hydrophone (or listening apparatus carried by anti-submarine craft), with which the submarine's movements under water could be followed. So long as the patrol system was in force the U boats had the shipping of the Allies at their mercy.

In earlier wars of magnitude the British Navy had employed convoy—the system by which merchant shipping proceeds in droves under the escort of warships. Under an Act passed in 1798 and re-enacted in 1803, vessels without a special license were not permitted to sail except in convoy.² On the outbreak of the Great War it was too hastily assumed that

¹ Castex, p. 73.

² The Act of 1798 may most easily be found in D. Steel's *Shipmaster's Assistant* (London, 1799), Eighth Edition, p. 392. Convoy was the normal practice in sea wars before 1793.

the convoy system was impracticable for two reasons—because merchant shipping was incapable of manœuvring in fleets and because warships were not available. It was also argued that a squadron of vessels would be likely to lose more heavily from mines and would congest ports on its arrival and be difficult to unload and reload quickly. None of the arguments against the system had insuperable force.

The war vessels which were employed in patrol duty could be just as well utilised for convoy, while armed merchantmen were capable of acting with additional effect when marshalled in numbers. The want of fast destroyers, which was due to the failure to achieve decisive victory at Jutland, and to the subsequent necessity of maintaining a large destroyer force with the Grand Fleet, could be temporarily met by assigning one or two destroyers instead of four or six to each convoy. The degree of security obtained would thereby be diminished, but it would be much greater than with patrolled routes. In March, 1917, coal convoys between England and France were organised, and thenceforward operated with extraordinary immunity, as only 14 out of 8,825 vessels crossing in convoys between March and August, 1917, were lost. In April, 1917, as has already been mentioned, the Scandinavian convoy began to work, and there again the results were good.

If the United States had thrown its effective naval forces into the war when it was forced into hostilities with Germany, immense suffering and loss would have been spared the Allies, and in the judgment of so great an officer as Sims,¹ the crisis of 1918 would never have arisen. The United States could have had a million men in France in March, 1918, and it is safe to say that the collapse of Germany would have come early in 1918, with a saving to England of some £3,000,000,000 in money and to the Allies of 500,000 lives. Owing to Mr. Wilson's hesitations, not to any want of energy or good will in the United States Navy, what aid was sent was sent reluctantly and late, despite all Sims's appeals. Not until August, 1917, was "moderate assistance" forthcoming from the United States at sea, according to Sims, and not until that assistance was available was convoy given to the Atlantic trade. From the end of August 1917, the Allied losses began to decline. In October convoy was introduced in the Mediterranean where previously the sinking of Allied shipping

¹ Evidence before Congress Committee.

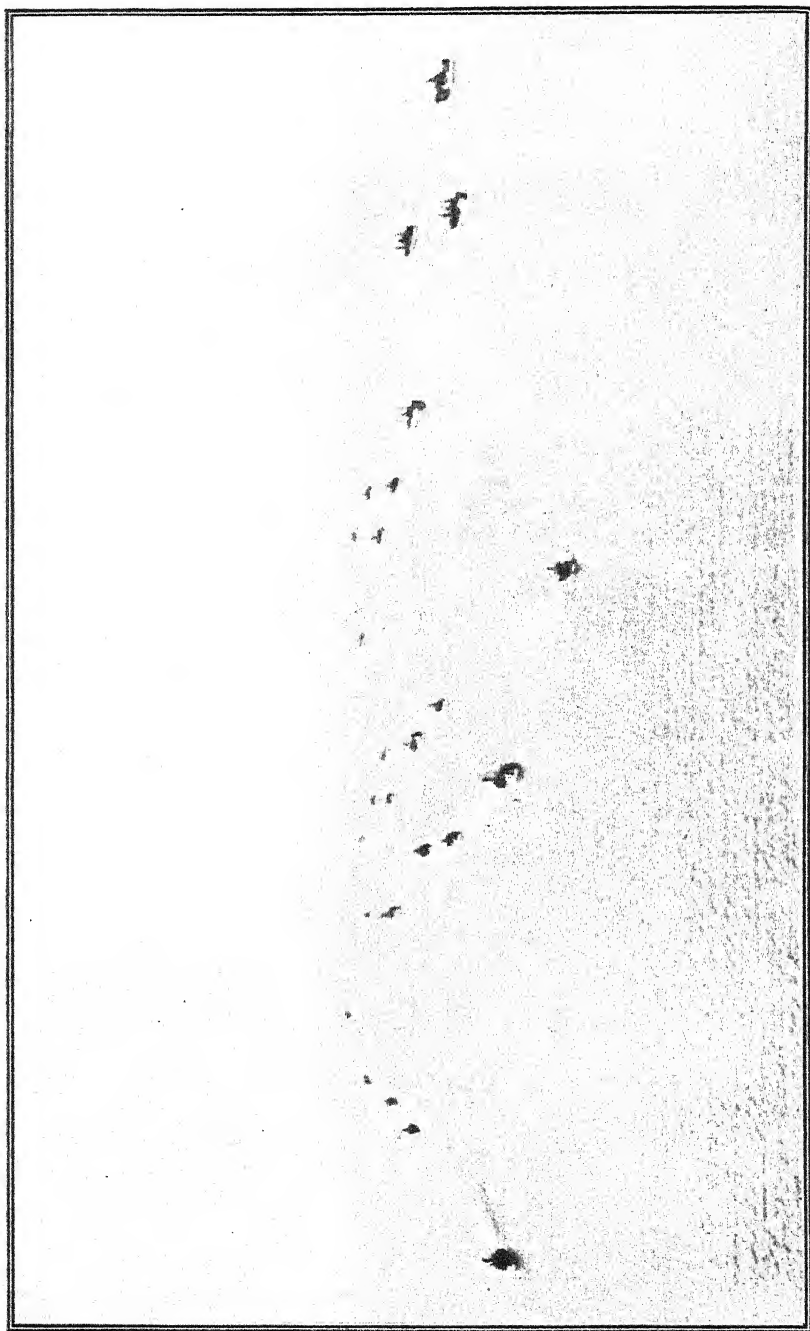


PLATE 44

A CONVOY AT SEA: PHOTOGRAPHED FROM THE BRITISH AIRSHIP C₂

[p. 226]

As the photograph is taken from a great height there is no horizon. The arrangement of a convoy is well shown and it will be noted that considerable manœuvring power was required of the merchant vessels steaming in such formation.

had been a pleasant sport for the German commanders, but sailing in convoy did not become the invariable rule till the close of the year. The Allies were then at last fighting the submarines instead of passively defending themselves and building tonnage for the U boats to sink.

The convoy system was, in fact, an offensive against the submarines. It did not give complete security, but then no one who had studied history could expect that it would. None the less, it altered the whole tendency of the submarine war. The tonnage destroyed—even according to the U boat captains, who were naturally generous in their estimates—fell, and fell to such an extent that it was clear the war was not going to be won by the Germans at sea. The dates passed at which Great Britain was to sue for peace; she still stood unflinching and firm. The weapons with which the submarine was effectively fought were multiplied; depth charges were improved and perfected; and presently the wastage of the U boats exceeded the new boats completed. The German General Staff realised that the submarine campaign had failed, and this was the reason for the great offensives of 1918, which meant such fearful sacrifices in blood and money for the European allies of the United States. England, France and Italy had to support the shock of the most violent assault that has ever been delivered by brave and admirably trained troops.

All things considered, the losses of the convoys were exceedingly small. In the whole period of convoy 16,539 ships were escorted safely, with a loss of 102 torpedoed in convoy and sixteen from marine perils.¹ The convoy which moved between New York and Europe and which began working on a small scale in May, by November 30, 1917, had escorted 1,280 ships with a loss of only eleven, a percentage of but .93. The loss in the homeward-bound Gibraltar convoy was 2.5 per cent. between July and November 30; and that in the dangerously exposed Scandinavian convoy between April and November 30, 1917, 1.1 per cent. With the convoy system alterations of routes were easy and could be carried out on a wireless order. Though it had been supposed that a convoy would offer a submarine great chances the U boats, except when commanded by unusually good officers, were not able to attack with any success.

One such feat was the sinking of the *Justitia*, a British vessel of 32,000 tons, by UB 64 and U 54 on July 19 and 20, 1918, off the north coast of Ireland. UB 64 first hit the steamer

¹ Jellicoe, *Crisis*, p. 144. Cf. also Fayle, iii, pp. 472-3.

with a torpedo amidships, and then dived. Thirty-five depth charges were exploded near her by destroyers and submarine chasers, but a couple of hours after her first attack, UB 64 came to the surface and fired two more torpedoes at the *Justitia*, which had stopped, and was surrounded by destroyers. Both hit without sinking the steamer and once more twenty-three depth charges were exploded against UB 64 with no serious damage to her. After another three hours or more under water UB 64 made a third attack on the ship which had been taken in tow by tugs, and herself had eleven more depth charges exploded near her. Yet another attack was attempted next day, but the torpedoes missed, and as UB 64's oil tanks were leaking, leaving a tell-tale trail on the surface, she had to show extreme caution. But she remained near and called up other submarines by wireless with the result that U 54 arrived, fired two torpedoes at the *Justitia*, and sank that ship at last after six torpedo hits. This encounter was quite exceptional, though it suggests questions as to what might have happened had the submarines concentrated in groups to attack important convoys. One such concentration was attempted at the entrance to the Channel in May, 1918, but on that occasion no success was obtained. Apparently the German U boat commanders found that when acting together they were liable to attacks by Allied submarines.

One result of the convoy system and the increasing energy of the war against the submarine was that she was compelled more and more to rely upon the torpedo as her principal weapon. Earlier in the conflict the German boats generally employed the gun in preference to destroy hostile merchantmen, only using the torpedo against armed merchantmen or warships.¹ Torpedoes were costly and their supply extremely limited; moreover, they lacked the certainty of guns in the hands of good gunners.

Signs that submarines could play an important part in the war against an adversary's coast multiplied in late 1917. All through the year a German submarine service had carried arms and munitions to the Senoussi, who in the region of northern Africa, where Tripoli and Egypt meet, were waging war on both the Italian and British. The German boats worked this service from Adriatic ports until the concentration

¹ Castex, p. 54. The maximum number of torpedoes carried by U boats in service before 1918 was twelve to sixteen. The largest total ever carried was twenty-four (in addition to forty-two mines) in U 117-121. Michelsen, p. 178.

of Allied anti-submarine craft about the Otranto barrage became too troublesome for them. UC 73, a submarine of only 420 tons, armed with one 3.4-inch gun, shelled Homs and Benghazi, thus causing considerable annoyance.

The U cruisers (U 151-156)¹ converted merchantmen submarines of the DEUTSCHLAND type, with an endurance of over 13,000 miles and a battery of two 6-inch and two 3.4-inch guns each, went far afield. U 155 of this class on July 4, 1917, bombarded Ponta Delgada in the Azores. U 156 was fitted with apparatus for severing submarine cables and cut five cables off the United States coast towards the end of 1917. On December 12 she bombarded Funchal, wrecking the church of Santa Clara and killing or wounding several non-combatants. She ended her career on a British mine in the North Sea on October 25, 1918. U 152 cruised for seventy-eight days in the Atlantic, attacking vessels off the coast of Portugal and off the Azores and Canaries. U 153 and 154 carried out a cruise in company, during which U 154 on April 9, 1918, bombarded Monrovia in Liberia, inflicted several casualties, destroyed the wireless station, and laid mines off the port. In U 153's company she sank the British steamer *Bombala*, which put up a stout resistance against overwhelming odds. U 154 was finally surprised and sunk by the British submarine *E 55* on May 11, 1918, while she was on the surface. U 151 in April, 1918, proceeded on a cruise off the United States coast, where she laid a number of mines and was active for more than a month. She was able to destroy nineteen vessels with great ease as no special anti-submarine precautions had then been taken; she was unable to interfere with the movement of troops, though she was at sea altogether about 100 days.

Neither German nor British opinion was favourable to the large submarine. It was difficult to handle and apt to be slow in diving, and however formidable it looked on paper, it was not so dangerous as its equivalent tonnage in smaller boats. But it will probably prove a troublesome antagonist in future naval wars; and with its powerful gun armament and a certain amount of armour protection (which some of the largest German submarines received) it would be able to make short work of armed trawlers and yachts.

In 1918 the variety of measures taken against the U boats began to produce cumulative effect, just at the time when United States troops were being transported in large numbers

¹ Castex, p. 103 ff.

to Europe, to meet the strain created by the collapse of Russia and the failure of the American Government to enter energetically into the war at an earlier date. The following are the figures in thousands of net register tons sunk during the year:

		British.		World Total.			British.		World Total.
1918									
Jan.	..	179.9	..	306.6	June	..	162.9	..	255.5
Feb.	..	226.8	..	318.9	July	..	165.4	..	260.9
March	..	199.4	..	342.5	Aug.	..	145.7	..	283.8
April	..	215.5	..	278.7	Sept.	..	136.8	..	187.8
May	..	192.4	..	295.5	Oct.	..	59.2	..	118.5
					Nov.		10.1	..	17.6

At the opening of 1918 the effective U boat force was 134 boats and during the year seventy-three boats were sunk or interned and eighty-five were completed. The reduction in Allied losses was fairly steady, month by month, but, even so, in the year the British loss reached the enormous figure of 1,694,000 tons. Yet by the skilful measures of the British Admiralty and by a drastic restriction of imports which inflicted no inconsiderable hardship on the British civilian population, British tonnage was provided to carry to Europe 55.4 per cent. of the¹ large United States force which between March 1918 and the Armistice, reached France. Some check was imposed on U boat activities by the German Government's order, issued on October 24, 1918, not to attack merchantmen, though occasional attacks were made after this date, even when the end of the war was in sight.²

To reduce the Allied losses it was important not only to close the Straits of Dover, which by early 1918 could no longer be passed by U boats without great danger, but also to obstruct the northern entrance to the North Sea. In November, 1917, the Allied navies decided to lay a series of mines across this entrance, at various levels, so as to form a huge barrage. The distance to be covered was over 200 miles, of which 150 were mined by the United States Navy and fifty by the British.³ Enormous numbers of mines were made and special minelayers employed. Other vast mine fields were laid by the British in the Bight of Heligoland where the British minelayers were continually at work.

¹ Sims, *Victory at Sea*, p. 302.

² E.g. the British steamers *Surada* and *Marcia* torpedoed Nov. 2, 1918, and *Sarpedon* attacked Nov. 7.

³ Sims, *op. cit.*, p. 250.

"Antennae mines" were introduced for the first time in the North Sea field; they had a thin copper cable stretching up to near the surface, and any metallic body, such as the hull of a submarine, by contact with this would explode the mine. It was thus possible to diminish the total of mines required as a large number of rows at different depths were no longer needed. According to German authorities, however, many of these new type mines exploded immediately after they had been laid, and when the field was swept up, only 43 per cent. of the mines were still in their places. U boats reported constant mysterious explosions when passing the barrage, so that the "antennae" appear to have been too sensitive.¹ The total German loss in the barrage is placed at only two submarine, and some part of it is ascribed to mistakes made by the boats destroyed. No doubt if the war had continued the mine field would have been improved as the Dover barrage was, till it became too dangerous for submarines to cross.

Similar mine barrages were to have been created at the entrance to the Dardanelles, where fairly satisfactory mine fields were already in existence at the beginning of 1918, in the Straits of Gibraltar, and at two other points in the Mediterranean, but the war ended before these immense projects could be carried out.

The German and British submarine losses were ascribed to the following causes:

		German loss.	British loss.
Mines	.. ..	41	4
Depth charges	.. ..	34	?
Ramming	.. ..	23	?
Gun fire	.. ..	20	3
Submarine	.. ..	19	4
Decoy ships	.. ..	13	?
Nets	.. ..	6	?
Aircraft bombs	.. ..	4	?
Accident	.. ..	9	12
Doubtful	.. ..	9	21
		<hr/> 178	<hr/> 44

There are slight differences in the various calculations as there were many cases where submarines were damaged by one weapon and sunk by another. Where there is definite

¹ Michelsen, p. 85.

information, the loss of the boat in the above table is credited to the weapon which caused the first injury. In addition to the above losses, seven German boats were interned by neutrals and fourteen destroyed by their crews on the loss of their bases. To the British loss must be added one boat interned, one used at Zeebrugge as a mine, and seven destroyed by their crews in the Baltic in 1918.

While large submarines were capable of extended cruises and could cross and recross the Atlantic with ease, without refuelling, and remain at sea three months or more, a considerable part of the U boat fleet at any given time was unavailable, owing to the necessity of resting the crews and overhauling the delicate machinery. The highest number of German boats simultaneously at sea was sixty-one in June, 1917, out of a total effective for that month of 132.¹ Of the other seventy-one, twenty-four were waiting at bases and 47 were refitting. The force normally at sea was about one-third of the effective total. From first to last, including forty-three boats complete or under construction before the war, 811 U boats were ordered for the German Navy, among them two large groups of submarine cruisers, totalling thirty-seven vessels with a submerged displacement of about 2,700 tons each. These last large vessels were never completed; they absorbed labour and material which in the opinion of experienced German officers would have produced far more effect had they been used for the construction of the smaller types. At the close of the war the number of effective U boats had fallen to 121, but they were still able to inflict harm as was shown by UB 50 which hit with two torpedoes and sank the old British battleship *Britannia* off Gibraltar on November 9, 1918.² This was the last vessel to be destroyed in the submarine war. The loss of life was small as the *Britannia* sank but slowly.

The total British tonnage of merchantmen and fishing vessels destroyed in the war was 7,830,000, of which 6,682,000³ was sunk by submarines, 682,000 by mines (mostly laid by submarines), 448,000 by cruisers, and 7,900 by aircraft, in addition to 184,000 tons interned in hostile ports. Beside this 8,008,000 tons of British merchant shipping was damaged, but not sunk (7,335,000 tons of it by submarines). The total world loss of tonnage excluding the German

¹ Figures in Michelsen, pp. 183-6.

² Schwarte, *Grosse Krieg*, iv, p. 287.

³ Fayle, iii, pp. 466, 468. Cf. also the British Official Return 199 of 1919.

States, was 12,850,000 of which 11,153,000 was due to submarines. The British Empire entered the war with 21,045,000 tons, so that more than one-third of its merchant shipping was destroyed. But against this must be set 717,000 tons of German shipping captured, 4,765,000 tons of new shipping constructed, and 1,197,000 tons acquired by transfer and purchase, making a total increase of 6,679,000 tons, from which again ordinary marine losses have to be deducted, to the extent of 1,100,000 tons, and transfers and sales to the extent of 731,000 tons. On November 11, 1918, the British merchant marine had suffered a net loss of 14.6 per cent., or 3,084,000 tons; in British ocean-going shipping the proportion of loss was 17.7 per cent. The United States did not risk its shipping to any great extent in the war zone¹ and showed a war loss of only 389,000 tons, which was much more than made good by new construction. The French war loss was 907,000 tons and the Italian 853,000.

The following summary gives the leading events in the submarine campaign down to the opening of the "ruthless war":—

1914

- Oct. 20 British steamer *Glitra* sunk by U 17.

1915

- Feb. 4 German blockade proclaimed after Feb. 18, when all ships would be sunk in the war zone.
 Feb. 10 British instruction to ships to hoist neutral flags.
 Mar. 11 British retaliatory blockade proclaimed.
 May 7 *Lusitania* sunk.
 May 13 United States Note protesting: orders issued by German Navy on June 6 not to attack large passenger ships.
 Sept. 18 German Government ordered U boats to cease operating in the Atlantic and Channel and in the North Sea to operate under cruiser conditions (no "ruthless" sinkings.)

1916

- Feb. 12 German land command decided in favour of ruthless submarine campaign.
 Mar. 15 Tirpitz dismissed for advocating such a campaign.
 Mar. 24 Passenger steamer *Sussex* torpedoed.
 April 20 United States Government threatened to break off relations if such acts were not stopped.
 April 24 German Government ordered submarines to operate under cruiser conditions.

¹ Fayle, iii, p. 258.

BATTLESHIPS IN ACTION

[1917]

1916

- Sept. 28 German Chancellor declared that all weapons must be used against England.
- Oct. 7 Orders issued to resume cruiser warfare with U boats in British waters and to send four U boats to the Mediterranean.

1917

- Jan. 9 German council of war at Pless decided in favour of ruthless submarine warfare to begin on Feb. 1.

CHAPTER XXIX

Baltic Operations—Fisher's Scheme—Approaches to Baltic Mined—"Magdeburg" Sunk—"Pallada" Submarined—British Submarines Enter the Baltic—Their Activity—"Moltke" Torpedoed but not Sunk—E 13 Out of Action—Dubious Swedish Proceedings—Collapse of Russian Discipline—Germans Clear Riga Gulf—"Slava" Sunk—German Expedition to Finland—British Operations Against the Bolsheviki—Motor Launch Attacks on Kronstadt—British in the White Sea.

IN the Baltic the Russian Navy stood strictly on the defensive, and the British Staff in the earlier months of the war made no attempt to break the German blockade of Russia. The British Admiralty had its hands full in other directions and, as has been seen, it was waging war on defensive lines. If the British Fleet was to enter the Baltic, steps must be taken beforehand to paralyse or destroy the fighting power of the German Navy in the North Sea. Fisher, when, in November, 1914, he framed his scheme of operations to end the war by a landing in the Baltic, assumed that the High Sea Fleet could either be decisively defeated or be mined in, with the aid of an advanced British base at Borkum, which was to be seized for that purpose. The whole scheme was too vague and too daring; it was never checked by the Navy and Army Staffs, and when communicated in outline to the Russian command was only received with hesitating acceptance.

Control of the Great Belt was essential for the British if as he proposed, large Russian forces were to be moved by sea to the Pomeranian coast; but so long as Danish neutrality was maintained that control was difficult or indeed impossible to obtain. A British Fleet in the Baltic would have had no good bases, for the Russian ports were poorly equipped; and the German Navy had swarms of torpedo craft which would have been a constant danger. But long before Fisher's new

Armada was complete he himself had resigned and the Russian Army had suffered a succession of stunning disasters which made the scheme of landing on the Pomeranian coast absurd. One unfortunate consequence of this plan was that it led him to neglect measures for immediate British action in Baltic waters, and to postpone operations there till the new fleet was available. The German command was intensely susceptible¹ to any Baltic menace, so that this inertia at a fateful moment was most unfortunate.

The German commander in the Baltic was Prince Henry of Prussia, with a squadron of light cruisers composed of the *AMAZONE* (flag of Rear-Admiral Mischke), *AUGSBURG*, *MAGDEBURG*, *LUBECK*, *UNDINE*, *THETIS* and *GAZELLE*, only the second and third of which were modern; and various old vessels and destroyers, reinforced from time to time as units or squadrons were available from the main German Fleet in the North Sea. Against these vessels the Russians had four pre-Dreadnought battleships, *Paul I*, *Andrei Pervozvanni*, *Slava*, and *Tsesarevitch*; four fair armoured cruisers, *Rurik* (a ship launched in 1906 and slightly superior to the German *BLÜCHER*), *Pallada*, *Makaroff* and *Bayan*; with numerous older ships of small value. There was a destroyer force of thirty-six old boats and half a dozen antiquated submarines.² One of the best vessels in the force was the flotilla leader *Novik*, of 36 knots, which was fitted for mine-carrying. The Russians precipitately abandoned their naval station at Libau on the outbreak of war; their Navy, like the German, in the North Sea, acted on the defensive, but each side carried out mining operations against the other.

On August 2 the light cruisers *MAGDEBURG* and *AUGSBURG* (each 27 knots, six 4.1-inch guns broadside) laid mines off Libau and shelled that port at long range, with the result that the Russians prematurely set fire to their large depôts there. During the next few days the deep water entrances to the Baltic through the Great and Little Belt were closed by mines. The Sound was too shallow for any but light draught vessels. In the Great Belt the Danes laid a double line of mines between Funen and Seeland, and the Germans laid mines between Langeland and Laaland, at each end extending far into Danish waters. The British Staff does not seem to have realised what the effect of thus closing the main passage to the Baltic would be, and no protest was offered to Denmark; indeed she was rather encouraged in

¹ Cf. Reventlow, *Der Einfluss der Seemacht*, p. 57.

² Graf, 1.

her mining operations.¹ Again the Little Belt was so mined by the Danes as to close it to British ships but not to German, though a strait leading to such a sea as the Baltic cannot be closed by neutrals at their liking.

Thus the net result was that the Germans had their private route to the Baltic by the Kiel Canal, which would accommodate their largest warships when they had been lightened (a process which took some time and thus would paralyse the ships engaged for a week or so) and they had also a "side-door" for small craft in the Little Belt. The British Navy was left with only one somewhat shallow passage, the Sound, which was also mined in the channel nearest to Copenhagen, compelling vessels to pass through the Flint Rinne close under the Swedish coast. The Germans endeavoured, unsuccessfully, to persuade the Swedes to obstruct or close this channel as well.

The German light craft destroyed the Russian lighthouses at the entrance to the Gulf of Finland and laid numerous mines. Early on August 26 Rear-Admiral Behring, who had succeeded Mischke, lost the MAGDEBURG. In dense fog she struck the rocks near Odensholm Lighthouse and became a complete wreck. Most of her crew were transferred to the destroyer V 26, which, when crowded with men was attacked by the Russian cruisers *Bogatyr* and *Pallada*, and narrowly escaped destruction. The German loss in this affair was 17 killed, 17 wounded and 75 missing or prisoners, and one of their best light cruisers. Moreover, the *Magdeburg's* secret papers, signal books, and ciphers were recovered by the Russians who were thus able for a time to read the German wireless. This precious information was immediately communicated to the British Admiralty to which it was of immense service.³

To redeem this failure an attempt was made to lure the Russian cruisers upon a submarine trap, in the form of U 3, but that old vessel proved quite ineffective and was a danger rather to the Germans than to the Russians.² On September 1-2 the German light cruisers had a lucky escape from a detachment of superior Russian cruisers (*Rurik*, *Rossia*, *Oleg*, *Bogatyr*, *Novik* and a destroyer flotilla) off the island of Gothland; and the German Staff, alarmed at such a sign of Russian activity and anxious to deal a heavy blow at the

¹ The German Official History, however, regards the Danish policy as being distinctly advantageous to Great Britain. Reventlow (*Einfluss der Seemacht* p. 57) does not share this view.

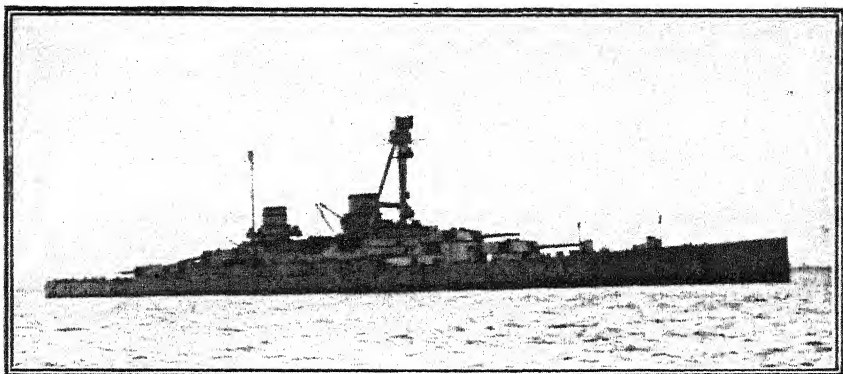
² Graf, pp. 7-9.

³ Churchill, i, p. 462.

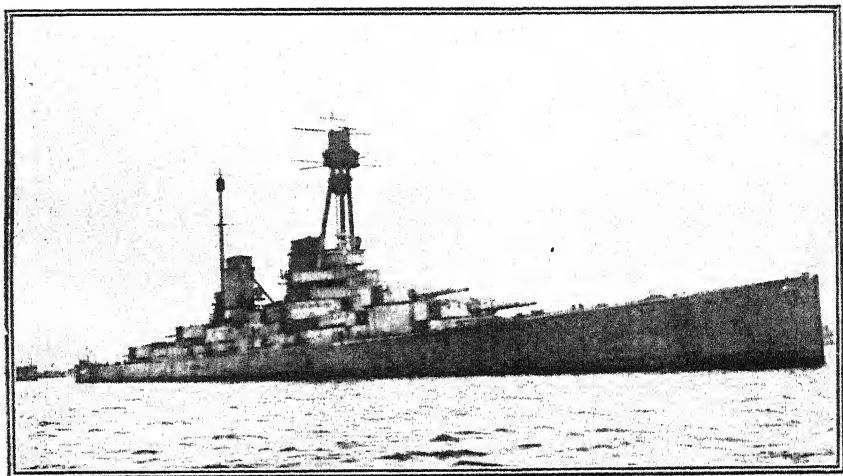
Russians, consented to lend Prince Henry the BLÜCHER and the 4th Battle Squadron (seven old ships of WITTELSBACH type) with a number of other vessels. He attempted to surprise and trap the Russians, but his ships by their constant use of wireless gave their foes ample warning and Essen easily eluded the blow. There was nothing more than an exchange of fire between the BLÜCHER and the two Russian armoured cruisers, *Bayan* and *Pallada*, at extreme range on September 6; and on the 8th the German armoured ships were recalled to meet the menace of a British attack on Heligoland. On September 12 Prince Henry was asked by the German Army for aid. It was thought that he could attack the communications of the 1st Russian Army at Memel and on the Niemen, but before he could act German troops had reached Memel and Tilsit.

On September 19 Falkenhayn, who had succeeded Moltke as Chief of the German Army Staff, applied to the Navy for an attack on the Russian coast, such as would detain Russian troops on the seaboard and prevent their movement to Galicia, where the situation was critical. Accordingly Prince Henry was given fourteen old battleships, two destroyer flotillas (twenty-two boats) and various other vessels with a brigade of troops. But as an indication of the inefficient German arrangements for transporting troops, it proved that ten to fourteen days would be needed to prepare the vessels for moving 7,500 men of all arms. The German Staff therefore decided that nothing more than a demonstration should take place, but the navy was directed ostentatiously to prepare transports for 20,000 men. On September 24 Prince Henry, with a large number of ships, was off Windau when he received news that a British fleet was in the Great Belt and might be at Bornholm on the 25th. He had already convinced himself that the demonstration at Windau was futile and he promptly fell back.

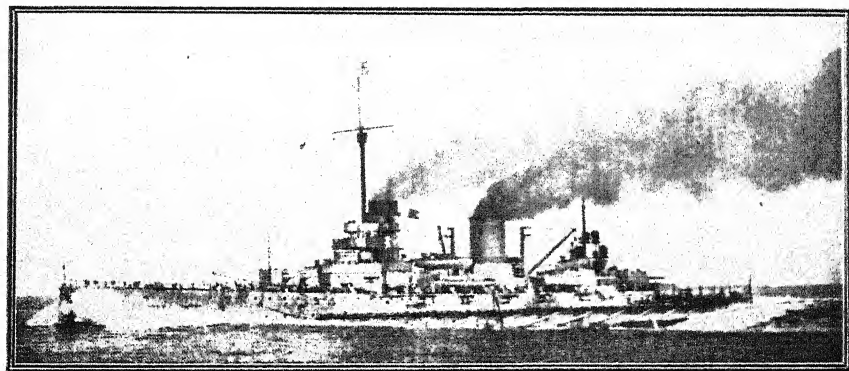
The close interaction between the Baltic and the North Sea and the nervousness which the mere report of British movements towards the Baltic caused, were illustrated by the German measures on this occasion. In the evening of September 24 Ingenohl was ordered to send as many cruisers, destroyers and submarines as possible to the Baltic with the 2nd Battle Squadron (DEUTSCHLAND pre-Dreadnoughts) and to prepare the 1st and 3rd Battle Squadrons (fourteen Dreadnoughts) for passage through the Canal. Instead of striking at the communications of the British Fleet, supposed



THE GERMAN BATTLE CRUISER "DERFFLINGER"
This shows her with her rig at the close of the war. She did not carry a tripod mast at Jutland, where she was much damaged and had two terrible ammunition fires. See p. 182



THE GERMAN BATTLE CRUISER "HINDENBURG"
A sister ship of the *Derfflinger* and *Lützow*. She was not complete in time to fight at Jutland.



GERMAN BATTLE CRUISER "GOEBEN"

to be entering the Baltic, the Germans were bent on purely defensive measures. Ingenohl reported that it would take five days to get his Dreadnoughts ready for the passage, owing to the necessity of disembarking coal and munitions. But in the afternoon of September 25 air reconnaissances showed that the alarm was a false one and the ships under orders for the Baltic were retained in the North Sea.

On October 11 off the Gulf of Finland U 26 (Lieut.-Commander Baron Berckheim) sank the Russian armoured cruiser *Pallada* (7,775 tons, launched 1906). The *Pallada* was cruising with the *Bayan* at 15 knots, and approaching within 600 yards of the submarine was hit by two torpedoes, which must have detonated her magazines. There was a terrific explosion and she vanished with her whole crew of 593 officers and men; the only undamaged object recovered from her was the ikon which she had carried and which floated.

That same day the British Admiralty decided to send three British submarines into the Baltic, as there were reports that the High Sea Fleet was exercising there. The boats selected were *E 1* (Lieut.-Commander N. F. Laurence), *E 9* (Lieut.-Commander M. K. Horton) and *E 11* (Lieut.-Commander M. E. Nasmith) with orders to pass the Sound at night, attack the German Fleet if possible, and when their fuel was exhausted retire on Libau. It will be observed that in October the British Staff was unaware that Libau had been abandoned as a naval base by the Russians two months before or that German minefields had been laid off it.

E 1 and *E 9* both got through safely on October 17 and 18: *E 11* was not able to effect her passage and had a curious misadventure, engaging and firing two torpedoes at the Danish submarine *Havmanden* which was mistaken for a German vessel. Neither of the torpedoes hit. The other two boats reached Libau after skilfully working through the minefields. *E 1* on her journey unsuccessfully fired two torpedoes at the German cruiser *VICTORIA LUISE*, and with *E 9* was ordered to Lapvik in the Gulf of Finland. Owing to the severe weather that autumn and winter in the Baltic, the British submarines did not effect much, though they were a constant menace to the Germans, and Prince Henry, in an order which he issued, stated that he would regard the destruction of a British submarine as equivalent to that of a Russian armoured cruiser.

In November, the German Staff determined to bombard Libau and sink blockships in the entrance, but on November 17, the old armoured cruiser FRIEDRICH KARL, while off Memel preparing to assist in the operations against Libau, ran into a Russian minefield and exploded two mines which sank her five hours later. All but 8 of her crew were saved. She was a vessel of 8,800 tons, launched in 1902. The blockships were successfully sunk at the entrances to Libau harbour but the German bombardment was quite ineffective. The rest of the year 1914 passed in mining operations which caused severe loss to Swedish trade. The German Official History notes that the laying of mines in the immediate neighbourhood of a hostile port proved of small value. The more effective—and more barbarous—plan was to mine the largest possible extent of water and the neighbourhood of seamarks. The Russians retaliated; each side had numerous vessels damaged or sunk by mines.

In the Baltic during the first half of 1915 the mines laid by the fast Russian ships were a source of perpetual danger. On January 25, the German cruisers AUGSBURG and GAZELLE struck mines laid by the *Rossia* and were only got into Stettin with difficulty. That same day in an operation against Libau the old German armoured cruiser PRINZ ADALBERT ran hard aground, but was got off by the clever expedient of using a number of destroyers in close formation at high speed to raise a wash, which floated the vessel off, with 400 tons of water in her hull. At the same time the German naval airship PL 19 was blown inland into Russian territory and destroyed. In February the Russian armoured cruiser *Rurik* touched a sandbank and was so badly injured that she was out of action for three months.

In March, four of the modern German light cruisers co-operated in a demonstration against the Russian right on land with the object of saving Memel; and when that place fell aided the German land forces to recover it and advance into the Baltic provinces. With the help of the old armoured vessels PRINZ ADALBERT, PRINZ HEINRICH, ROON and BEOWULF, and four old battleships of the WITTELSBACH class, supported by light cruisers and destroyers, the Russian naval base of Libau was occupied on May 7, after a sharp bombardment. The Russians had no intention of seriously defending the place as they were in danger of being cut off on land. The Russian Fleet was relatively inactive after Admiral Essen's death, but four of its armoured cruisers

appeared on the scene and exchanged fire with the Germans.

The Russian Dreadnoughts (four of which were building at the outbreak of war) were now complete, and certain of them were ready for action. To paralyse them, the Germans resorted to minelaying on the largest possible scale. German minelayers penetrated into the Gulf of Riga, and the submarine U 26 sank the Russian minelayer *Yenisei* with the loss of all her crew except 21, on June 3.¹ On July 2, however, the German cruiser AUGSBURG and minelayer ALBATROSS, while on their way back from a mine laying enterprise, were caught off Gothland by the Russian cruisers *Rurik*, *Makaroff*, *Bayan*, *Bogatyr* and *Oleg*. The AUGSBURG in virtue of her high speed was able to escape; the ALBATROSS was badly damaged and driven ashore with a loss of 21 killed and 27 wounded, but she was subsequently salvaged. The Russian force was retiring north, when it was, a little later, overtaken by the German armoured cruiser ROON with the light cruisers AUGSBURG and LUBECK and a number of destroyers.

The *Rurik* had lost touch with her consorts when they came upon the Germans, and the other Russian ships were short of ammunition. The action was broken off in thick weather after an interchange of shots, by a Russian retirement. A little later the RURIK sighted the Germans and had a brush with the ROON. Menaced with submarine attack, the *Rurik* also retired with a loss of 11 killed and wounded.² The German armoured cruiser PRINZ ADALBERT,³ during this series of encounters put to sea from Danzig to support the ROON. She was, however, torpedoed by the British submarine E 9 (M. K. Horton) and so badly damaged that she was only got back to port with extreme difficulty.

On August 8 the Germans made a determined effort to penetrate into the Gulf of Riga, but were repulsed with the loss of several small craft in mine sweeping. The Russians sent to the Gulf the old battleship *Slava*, conveying her with the new Dreadnoughts *Petropavlosk* and *Gangut*.⁴ The Germans on their part brought up their battle cruiser squadron and two battleship Dreadnoughts, POSEN and NASSAU. On August 17 the German destroyers S 31 and V 100 were sunk by the Russian destroyer *Novik* or by mines,

¹ Graf, p. 38.

² Graf, pp. 47-8.

³ Mistaken at the time for the POMMERN.

⁴ Each twelve 12-inch guns in triple turrets.

but as against this the Russians lost the gunboat *Sivoutch*, destroyed in a fierce action in which about 100 of her crew perished; and the mine layer *Ladoga*, which struck a mine. The *Koriets*, gunboat, was driven aground and was destroyed by her own crew. On August 18 *E 1* (N. F. Laurence) torpedoed the battle cruiser *MOLTKE*, hitting her forward on the bow, so that she took on board 435 tons of water and lost 8 men killed. Though she could still steam at 15 knots, one of the results of this hit seems to have been the abandonment of the operations against the Gulf of Riga on August 21.

The British Navy had previously been informed by the Russian Staff of what was preparing and had been asked to give support. The British reply was to despatch two more submarines, *E 8* and *E 13*, to the Baltic. *E 8* successfully made the dangerous passage; *E 13*, unfortunately ran aground on the Danish island of Saltholm after passing the Sound, through a compass failure. While there, ashore in Danish territory on August 19 the German destroyer *G 132* discharged a torpedo at her and then opened fire on her, maintaining that fire when her men took to the water, and killing fifteen officers and men in neutral water in cold blood.

Though the German Navy might adduce the precedent of the destruction of the *DRESDEN* to justify an attack on an intact vessel in neutral water, there was no excuse for firing on the crew when they were attempting to escape in the water after their vessel had been disabled. A Danish destroyer finally intervened and steamed between the German vessel and her target. *E 13* was subsequently refloated but was interned in Danish custody till the close of the war.

When the German main force retired westwards after the failure of its Riga operations, the British submarines carried out a spirited campaign against German shipping in the southern Baltic, and without sacrificing a single life, sank in October, 1915, thirty-four German steamers and vessels. On October 23, *E 8* hit with two torpedoes the armoured cruiser *PRINZ ADALBERT* twenty miles south-west of Libau.¹ There was a terrific explosion and the German ship went down with all but three of her crew. About the same time the German light cruiser *DANZIG* struck a mine and was very badly damaged. In November and December the German Navy suffered four further mishaps in the loss of the light cruisers *UNDINE* and *BREMEN* and the destroyers *S 91* and

¹ Graf, p. 68.

1915-16] "PRINZ ADALBERT" SUNK

S 177, the first by torpedoes fired from *E 9* and the others from mines.

The winter of 1915-16 was again one of abnormal severity, and owing to the cold, the ice and the rapid development of the German minefields, and perhaps also to the failure of the British Staff to appreciate the importance of a vigorous offensive, the British submarines in the Baltic were able to effect little beyond causing the Germans incessant anxiety. The Russians had now four powerful Dreadnoughts complete besides a number of new and large destroyers, but their navy also was inert. Trouble with the crews occurred in two of the new Dreadnoughts and no doubt hampered the Russian command. The Germans had brought up the small new submarine mine layer UC 4, which stole inside the skerries on the Finnish coast and laid mines in waters which were supposed to be perfectly secure. Two German naval airships L 5 and SL 6 were put out of action by the Russians in the fighting about Riga.

In 1916 the Germans, owing to their great weakness in the Baltic and their concentration of their available forces against England, were on the defensive. To impede the operations of the new Russian Dreadnoughts 5,000 mines were laid. The Swedish Government was induced to extend its mine fields on the Swedish side of the Sound and the southern exit therefrom, and to refuse pilotage to any but Swedish vessels. The effect of this was, firstly, to prevent British submarines from entering the Baltic, and secondly, to deprive British merchantmen of the right of passage. The Swedish action was made the subject of a British protest on the grounds that it was a breach of the Treaty of 1826 with Great Britain and was a infraction of the principle that belligerents have the right of passage from one portion of the high seas to another, even when two such portions are connected by waters entirely territorial.

It was further contended by the British that the Swedish measures were so framed as to give an unfair advantage to Germany.¹ The problem was undoubtedly a difficult one and no satisfaction was obtained from the Swedish Government. Meanwhile to the support of the three British submarines of the *E* class in the Baltic, three small submarines of the *C* class (*C 26*, *27* and *35*, each of 320 tons) were sent by the White Sea and the Russian canal system. German activity in the Baltic was mainly directed to keeping clear a channel on the

¹ Hall, *Law of Naval War*, p. 159.

Kurland coast to Windau, thus covering the left of the land front in Russia. The Russians with small craft laid mines at night in this channel. A continuous mine war proceeded without any incidents of great tactical or strategic importance. Two airships were lost, SL 3 and L 38, in bombing operations against Russian naval bases.

In 1917 the collapse of discipline in the Russian Navy rapidly destroyed its fighting efficiency. The winter of 1916-17 was one of extraordinary severity in the Baltic, impairing the efficacy of the mine fields at a time when the Russians most needed them. When in May operations became practicable, the German Staff for some months abstained from any serious offensive, preferring to leave the Russians to ruin themselves. Large numbers of mines, however, were laid by submarine minelayers off the Russian ports. In September, 1917, the German Staff, after the capture of Riga by the Army, decided to secure the islands at the entrance to the Gulf of Riga.¹ The enterprise would have been one of considerable difficulty had there remained a Russian Army or Navy; but both were utterly demoralised. A powerful German naval force was concentrated, including the Dreadnought battleships BAYERN (eight 15-inch guns), KÖNIG, KRONPRINZ, GROSSER KURFÜRST, MARKGRAF, KAISER, KAISERIN, PRINZREGENT LUITPOLD, KÖNIG ALBERT, FRIEDRICH DER GROSSE, and the battle cruiser MOLTKE, with eight light cruisers, fifty destroyers, six submarines, sixty motor-boats, seventy-two mine sweepers and a landing force of one specially strengthened infantry division. The main difficulty was to clear a way through the extensive Russian mine-fields.

Previous to the opening of the attack, thorough reconnaissance of the islands and the Gulf of Riga was carried out by aircraft. In the morning of October 12 the German battleships directed a terrific fire on the Russian works, protecting the island of Oesel, and the demoralised Russian troops offered only a poor resistance. The Germans then landed some 4,500 men in Tagga Bay, and detached another 400 who seized the battery at Toffri on the south point of Dagö. The fighting was severe and the *Slava* for a time drove back the German small craft. But on October 17 Oesel and Sworbe surrendered with 10,000 Russian troops. The German Navy sustained considerable damage from the Russian mines and the battleships BAYERN, GROSSER KURFÜRST and MARKGRAF, which struck mines, required

¹ Scheer, p. 296 ff.

extensive repairs. The KRONPRINZ, KÖNIG and KÖNIG ALBERT all had narrow escapes from the attacks of British submarines.

Moon Island was secured with 5,000 prisoners on October 19, on which day Dagö was captured. As for the Russian warships which had retired to Moonsund, the old battleship *Slava* was sunk by the fire of the German Dreadnoughts, and the other Russian vessels including the *Tsesarevitch* (renamed *Grashdanin*) and *Bayan*, were driven northwards. In view of the large German force it is surprising that they were allowed to escape. Possibly political reasons explained the omission to destroy them. After the loss of Riga and these islands the Russian Navy could be disregarded and the German naval command could do what it liked and in 1918 could arrange for a German landing in Finland. The risk from mines and submarine attacks alarmed the German Government and led it to discountenance further operations against the republicans in Russia.

Strong complaint was made, and not without some reason, that during these German operations the British Grand Fleet did not seize the opportunity to strike at the Germans in the North Sea.¹ The British Admiralty claimed that it had sent all the available cruiser divisions, destroyers and submarines to demonstrate in the Kattegat, but the effect was insignificant.

The Baltic was the scene of further fighting after the suspension of hostilities between Germany and Soviet Russia. The German Staff, anxious to cut the line of communications between the Allies and the Russian front, which ran by the light railway from the Murman coast, east of Finland and through Karelia, decided to send a small force to Finland. Its mission was to put down the murderous Communist tyranny in Finland, which was then receiving support from the Russian Bolsheviks, to attack the railway to the Murman coast, and to seize the immense depots of Allied munitions on that coast.

In March, 1918, a German expedition, escorted by two battleships occupied the Åland Archipelago, after Reval had been seized on February 25, as the result of an understanding with the Estonians, who were only too eager to escape Bolshevik rule. On April 1 the transport of 12,000 troops under General von der Goltz to Finland began; and on April 3, covered by three battleships, the landing took place at Hangö. The battleship WESTFALEN, before the transports moved into

¹ Schoultz, p. 307.

Hangö harbour, steamed close to the forts of Russarö, which were manned with Russian troops, ready to open fire, whereupon the Russians hoisted the white flag. On April 12 the Germans pushed into Sveaborg and Helsingfors. They drove out the Finnish and Russian Communists and rescued Helsingfors from the Red Terror.

All difficulties were removed by the general welcome which the Finnish population gave them, and by the collapse of Russian discipline, so that no attack by Russian Army or Navy was to be feared. Indeed here the Germans came as liberators from Communism. The seamen of the Russian Baltic Fleet actually concluded an express agreement with the Germans by which they were to remain neutral. The Germans were thus able to secure Fort Ino, the outermost work defending Kronstadt. They were contemplating a move on Petrograd, when the mutiny in the High Sea Fleet put a stop to all further prosecution of the war against the Communists in the Baltic. In these ably executed operations the German Fleet lost the RHEINLAND, which was so badly damaged by running on a reef that she was never repaired, though she was got back to Kiel.

When the war with Germany closed, the Allies despatched considerable naval forces into Russian waters, to operate in support of the Russian republicans, as opposed to the Russian Communist party. The 1st British Light Cruiser Squadron with three destroyer flotillas entered the Baltic immediately after the Armistice, but on December 5, 1918, lost the *Cassandra* which struck a mine and sank. In May, 1919, the *Curaçoa*, another British light cruiser, was mined and damaged. As some offset to these casualties two Bolshevik flotilla leaders of Novik type were captured, and on June 17 the Bolshevik cruiser OLEG was attacked by British coastal motor boats and sunk by a torpedo.

In August, 1919, the Bolshevik submarine ERSK was sunk by British destroyers. On August 18, a most gallant attack was made on Bolshevik vessels in Kronstadt harbour by eight British coastal motor boats. In certain respects this affair recalls the blocking operations at Zeebrugge and Ostend, and it was carried out with great daring against vessels in the basins of a naval port, which was defended by batteries of extraordinary power. The Bolshevik gunners, however, were men of a very different type from the Germans who manned the Belgian coast defences, and had neither their courage nor their discipline and skill. The motor boats

made their way in through the difficult approach and torpedoed and sank in shallow water the Dreadnought PETROPAVLOSK, the old battleship ANDREI PERVOZVANNI, the old cruiser PAMYAT AZOVA, and a flotilla leader.

The British loss in this astonishing affair was only two motor boats sunk and 2 officers and 14 men killed. The PETROPAVLOSK was completed during the war and was a vessel of 23,000 tons, supposed to be capable of resisting the explosion of two torpedoes and remaining afloat. The fashion in which she succumbed to her pigmy assailants suggests doubts whether her watertight doors were closed and whether adequate precautions were taken on board her; but it remains a fact that she and the Austrian SZENT ISTVAN were the only Dreadnoughts sunk by torpedoes in the war and the ensuing fighting and that they were both sunk by small motor craft. She went down on an even keel and was raised and repaired in 1920, with the ANDREI PERVOZVANNI. Meantime the British submarine *L 55* was lost, but apparently without any casualties to her crew. In October, two Bolshevik destroyers were sunk by British destroyers. In February, 1920, the British squadron was withdrawn and hostilities with the Bolsheviks ceased.

Owing to the blockade of the Russian ports in the Baltic and Black Sea by the Germans and the Turks, the sole line of communications by which, without making use of neutral territory, the Allies could reach European Russia, was through the White Sea and the Murman coast. On the Murman coast before the war the Russian Government had begun the construction of a port at Alexandrovsk, where the water is free from ice all the year. But the development of the place had not proceeded far and the projected railway to St. Petersburg had not even been commenced. The line, as surveyed, passed through difficult country, much of it marsh, and though it was eventually laid, its capacity was comparatively small. It was opened for through traffic on November 28, 1916.

The White Sea is closed by ice in most years except during the four summer months, though by the efforts of Canadian ice-breakers it was kept open through the winter of 1915 till January, 1916. Its port, Archangel, was accessible to ships of 24 feet draught during the open season. Thence a narrow-gauge railway ran to Vologda and the main Russian system, but the capacity of this line was extremely limited, and owing to the break of gauge at Vologda it could not

move more than 300 wagons a day. The approaches to the Murman coast and Archangel were through comparatively shallow water and could easily be mined. The German U boats and minelayers were therefore busy in this inhospitable region, and the losses of Allied merchantmen were heavy. To add to the difficulties of the Allies, the winter of 1915-16 was one of the coldest ever known in the White Sea, and sixty to seventy Allied steamers were frozen in and their aid lost between January and July.

A detachment of British trawlers for mine-sweeping and a number of other Allied small craft were sent to the Murman coast and White Sea to protect traffic. The Russians gave little help, and owing to negligence on their part there was much plundering of the vast stores of all kinds that were landed at the expense of the Allies and, in particular, of England. The old battleships *Albemarle* and *Glory* and old cruisers *Intrepid* and *Iphigenia* were long employed in those waters. There were plenty of Russian craft on the spot, but they were not properly utilised by the Russian authorities. The complete absence of Russian good-will and the neglect of such important details as the buoying of the minefields, made the British task peculiarly hard. When the revolution began, the stores which the British and other Allies had landed were lying in these Arctic ports, and owing to the breakdown of the Russian railways there was no longer any prospect of their reaching any Russian troops that remained at the front and were willing to fight.

In view of the German landing in Finland, the Allies feared that the Germans might secure these stores, which would have been of inestimable value to them. In June, 1918, it was therefore decided to send a small Allied force to Archangel, which place was occupied on August 2, 1918. After the German collapse the Allies remained in north Russia until September 27, 1919, in order to prevent the stores from falling into the hands of the Bolsheviks. There was some skirmishing on the river Dwina in which British light draught gunboats played a leading part, and two small monitors, *M 25* and *M 27* had to be blown up.

CHAPTER XXX

The Mediterranean—"Goeben" and "Breslau"—Allied Plans of Operation—Allied Forces—Menace from Austria—French and British Movements —British Battle Cruisers in Touch with the "Goeben"—She Escapes—German Ships Reach Messina—Steam off to the Dardanelles—Why they were able to Get Away—First Operations in the Adriatic—Bombardment of the Dardanelles Forts—Turkey in the War—"Goeben" and "Breslau" in the Black Sea—Desultory Engagements There—Russians Generally Superior—Outbreak of Russian Revolution.

At the very outset of the naval war the Germans were able to secure an important success in the escape of the GOEBEN and BRESLAU from the British and French. The GOEBEN, flagship of Rear-Admiral Souchon, was a German battle cruiser of the most modern type. She was well protected with 11-inch armour on the water-line and 10-inch on her turrets; and she carried ten 11-inch guns so disposed that all could fire on either broadside, and six ahead or astern. The weight of one round from her broadside of ten 11-inch and six 6-inch guns was 7,220 pounds. Her displacement was 22,000 tons; her engines were of 86,000 horse-power; and on trial she had steamed 28.6 knots for a short period.

In July, 1914, according to Souchon, she was only good for 24 knots and that for but a limited period.¹ Her boiler tubes were in such poor condition that her real speed for any considerable number of hours was not over 18 knots. Her replacement by the MOLTKE had been ordered but had not

¹ Kraus, *Die Fahrten der Goeben*, pp. 28-30. The British Staff had no information of these defects in the GOEBEN.

taken place; and the German Admiralty contemplated using her with the Austrian battleships in the Adriatic, regarding her as too slow for battle cruiser work until she had received a thorough refit.¹ She had been in the Mediterranean since November, 1912. The BRESLAU was a good light cruiser of 4,300 tons, with a trial speed of 27.6 knots, and a broadside of six 4.1-inch guns.

After the Serajevo affair efforts were made to put the GOEBEN into good steaming order. Her boiler tubes were as far as possible replaced at Pola, but the work could not be completely carried out and her steaming power remained an uncertain factor. On July 29, 1914, Souchon was warned from Berlin that the international position was serious. He at once proceeded to Brindisi, where the BRESLAU joined him, coming from Scutari and the Albanian coast. Both ships then left for Messina, under the secret naval treaty between the Powers of the Triple Alliance.

Though the French Navy by the terms of an understanding with the British Admiralty was to have control of operations in the Mediterranean, it had no battle cruiser capable of meeting the GOEBEN which was, as has been seen, a ship of singular force and more than a match for any Allied vessel in the Mediterranean. The only ships powerful enough to deal with her were the three British battle cruisers *Indefatigable*, *Inflexible* and *Indomitable*, and individually they were distinctly inferior to her. Their speed at this date does not appear to have exceeded 24 knots for a considerable number of hours, and was thus some knots less than her nominal speed, and by the test of operations at sea it was slightly less than the GOEBEN's actual speed.

Each of the three British ships carried batteries of eight 12-inch guns, of which, however, in the *Inflexible* and *Indomitable* not more than six could fire effectively on the broadside, without straining the ship. They were so weakly protected, having only 7-inch armour on their sides and about the same thickness of armour on their turrets, that singly they could not be regarded as a match for the German vessel, even if they had been able to overtake her. The British Admiralty failed to place opposite the GOEBEN battle cruisers of distinctly superior force and speed. Nor was the alertness which Souchon displayed shown by the British commander on the station. The Germans were quicker in making their preparations.

¹ Conrad, iv. p. 278.

The British Fleet in the Mediterranean was much scattered. At Alexandria, under the personal orders of the commander-in-chief, Admiral Sir A. B. Milne, were the *Indefatigable* and *Inflexible* (the latter with his flag), the two armoured cruisers *Warrior* and *Black Prince*, the light cruisers *Chatham*, *Dublin*, *Gloucester* and *Weymouth*, and thirteen destroyers. At Durazzo in the Adriatic, under the second in command, Rear-Admiral E. C. T. Troubridge, was the armoured cruiser *Defence* with one destroyer. The *Indomitable* and the armoured cruiser *Duke of Edinburgh* were at Malta, where the former was just beginning her annual refit, and was not instantly ready for sea. Milne's first action was judicious—to concentrate his force at Malta, as the war plans which had been drawn up in 1913 provided. He was then by those plans to join the French Navy for battle with the forces of the Triple Alliance.

In a plan of action for the Mediterranean there were two objects of special importance. The first was the elimination of the GOEBEN, a ship from her speed and powerful armament capable of causing immense mischief. The second was the safe and swift movement of the 19th corps from Algeria to France, as the security and indeed the very existence of France would depend upon the ability of the French Army to hold the Germans in check on land. At the close of 1913 a secret naval convention had been concluded between the Powers of the Triple Alliance which fixed Messina as the point of concentration for the Italian Fleet, Augusta for the Austrian, and Naples for the German ships in the Mediterranean. If the German ships were not able from any reason to make for Naples, they were to go to Messina.¹ The text of this convention was in the possession of the French Government, but from some oversight it was not communicated to the British Admiralty War Staff and does not seem to have been known to the French Navy in the Mediterranean.

Knowing nothing of these plans, the Admiralty on July 30 sent Milne elaborate instructions, stating that Italy would probably remain neutral, but directing him not to be "seriously engaged with Austrian ships" until Italy's intentions were definitely ascertained. He was to husband his forces at the outset, and his first task was "to aid the French in the transportation of their African army by covering and, if possible, bringing to action individual fast German

¹ Pribram, *Geheimverträge*, i, p. 368 ff.

ships, particularly GOEBEN." It was a mistake to give him two different objectives; the first necessity was to get the GOEBEN out of the way and a simple order to him to destroy her was what was required. Help in covering the French transports was not needed. The French Government in the spring of 1914 had decided to move the 19th corps to the port of Cette in southern France unescorted except by some of the older and weaker French armoured ships (as the Japanese had moved their troops to Manchuria in 1904, and as the British were to move their great armies to France), while the main French Fleet carried out an offensive against the main enemy force. Milne was told that he would be notified by telegraph when he might consult with the French admiral, which was tantamount to preventing him from communicating before he had received permission.

A further mistake on the part of the War Staff was to order the armoured cruiser *Black Prince* to be sent to Marseilles, that she might embark Lord Kitchener for Egypt, employing a powerful fighting unit for secondary purposes at a moment when all fighting force ought to have been concentrated for action. She was recalled from this errand on August 2, but did not regain Malta till August 3. Apart from his hampering instructions, Milne's difficulties were serious enough. He was quite in the dark as to the French position. The Austrian Fleet with three, or possibly four Dreadnoughts in commission,¹ was much superior in force to him. Of the GOEBEN's whereabouts he knew nothing, and he remarks, not unreasonably, that she was faster than any ship he possessed. The British Admiralty indeed was plainly anxious about Milne's strength, as it was Mr. Churchill's intention in July, 1914, to strengthen him by sending him a fourth battle cruiser, the *New Zealand*.

By the understanding with the French Navy the British Admiralty, while insisting on the necessity of keeping its hands free, had promised France to maintain in the Mediterranean a naval force, such that it would have "reasonable chance of success against the Austrian Fleet if this left the Adriatic." As the Austrian Fleet besides the three Dreadnought battleships, each with a broadside 50 per cent. superior to that of any of the three British battle cruisers, included three powerful battleships of the ZRINYI type, and six older and smaller battleships, the British Admiralty cannot be said

¹ The TEGETTHOFF, PRINZ EUGEN, and VIRIBUS UNITIS were in service; the SZENT ISTVAN was almost ready. Each of them had a broadside of twelve 12-inch guns with turrets and belt of 11-inch armour.

to have fulfilled its undertaking. Had Italy joined Germany and Austria, so far as can be seen a great naval disaster in the Mediterranean was almost inevitable. At the best the British would have been compelled hurriedly to evacuate that sea. The want of sufficiently fast and powerful British battle cruisers was one of the legacies of the unsatisfactory naval programmes of 1908 and 1909, and of the mistake made in advising New Zealand to build a vessel of the inferior *Indomitable* class, instead of one of the much more powerful *Lion* type.

The French Fleet under Vice-Admiral Boué de Lapeyrère¹ consisted of the solitary Dreadnought *Courbet*,² six earlier but powerful battleships of the *Danton* class, five old battleships, six old armoured cruisers and a large number of destroyers and submarines. Most of its ships were foul from want of docking and none of the battleships were good for more than 19 knots. At the last moment Lapeyrère changed his mind as to the plan of sending the transports without escort. He was at Toulon and thence conducted a telegraphic argument with the French Admiralty, which insisted on his carrying out the plan originally adopted. In the evening of August 2 wireless signals from the GOEBEN and BRESLAU had been taken in by the French station at Cape Bon in Tunis; they showed that the German ships were near Messina.

Lapeyrère was not unnaturally alarmed to discover that the two fast German cruisers were at large in the western Mediterranean; and at 8 p.m. that day he telegraphed orders to Bizerta and Algiers for the French transports with the 19th corps on board to delay sailing till warships arrived to escort them. The effect of this on the land operations might have been serious as it upset the time-table and delayed the 19th corps so that it could not take part in the campaign at the outset.

As Milne was in the dark about Lapeyrère's position and plans, so was Lapeyrère in the dark about Milne's dispositions. All this unnecessary friction was the result of bad staff arrangements before the war. It was another consequence of the indecision of the British Government, which could never make up its mind whether it was or was not to conclude a definite military and naval alliance with France. The

¹ He was inferior in rank to Milne so that the joint command in the Mediterranean had not been properly organised before the war.

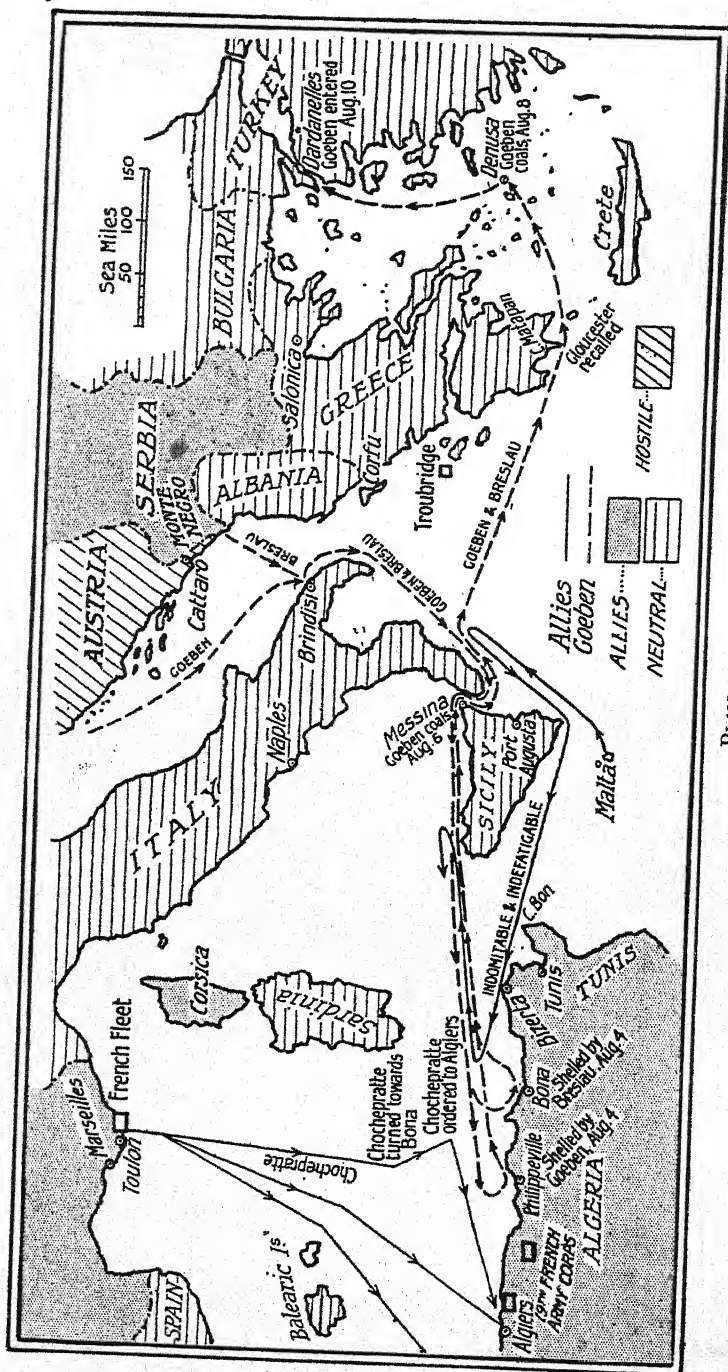
² In armour and armament the *Courbet* was similar to the Austrian Dreadnoughts, but had two fewer 12-inch guns on the broadside.

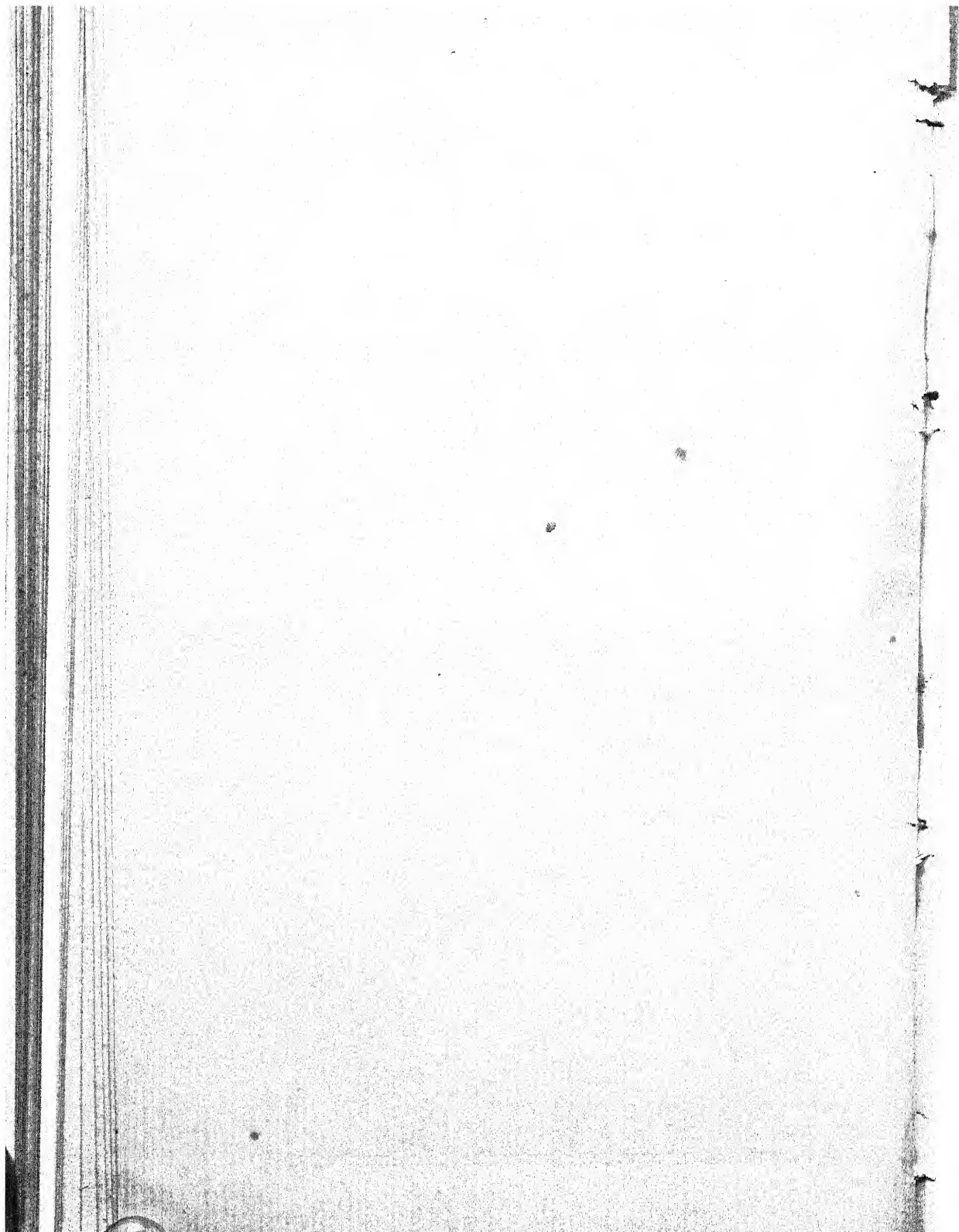
escape of the GOEBEN and the paralysis of the two Allied Navies in the Mediterranean were in fact ultimately due to political and diplomatic causes which at every turn fatally hampered the two commanders-in-chief. These officers ought to have been not merely permitted, but ordered to communicate and discuss arrangements in time of peace. The moment the situation became critical, as it did about July 24 or 25, they ought further to have been expressly directed to confer. They have been made the scapegoats of politicians whose interference was in large part accountable for their failure.

Lapeyrère did not display any excessive energy. He had not yet been instructed by his Government to open the secret code for communication with Milne, nor did he receive orders to do so till the morning of August 3. In the evening of August 2 he was ordered to put to sea and "stop the GOEBEN and BRESLAU as soon as he received news that hostilities had begun." He did not at once depart, but waited till 4 a.m. of August 3, when he left Toulon with the *Courbet* (his flagship and the only French Dreadnought), seventeen other battleships, six armoured cruisers, thirty destroyers and six submarines. He was informed from Paris that the Austrian battleships were at Pola. The weather was calm. He moved towards the African coast in a fan-shaped formation, but he held in his cruisers and destroyers, which was a mistake, as in the light of after-events they would certainly have located the GOEBEN had they proceeded at moderate speed and used any of the well-known methods of search.

When clear of the French coast his fleet broke up into three divisions. The first, of the six *Danton* battleships and twelve destroyers, steamed towards Philippeville in eastern Algeria. The second, of the *Courbet* and five battleships, steamed to Algiers. The third, of six old battleships, steamed to Oran in western Algeria. The French admiral was as yet unaware whether war had begun; the declaration of war was not received in Paris until 6.45 p.m. French time, on August 3, and as will be seen it was not immediately notified to him by the Government.

Milne in the afternoon and evening of August 2 received further instructions from the Admiralty to shadow the GOEBEN with two battle cruisers and watch the approaches to the Adriatic with other cruisers and destroyers. He was told that the situation was most critical and permitted to open





communications with Lapeyrère, to whom he immediately sent this wireless message:

“Admiralty desires combination between French and British forces. How can I best assist you? I have three battle cruisers, four armoured cruisers, four light cruisers, sixteen destroyers.”

He used the secret code, but could get no answer, as the message did not reach Lapeyrère at sea for some twenty-four hours, till 8.30 p.m. of August 3.

Milne himself remained with the *Inflexible* at Malta and on August 2 at 9 p.m. despatched Troubridge with the *Indomitable*, *Indefatigable*, the three available armoured cruisers, the *Gloucester*, and eight destroyers to watch for the GOEBEN off the mouth of the Adriatic, where they were subsequently reinforced by the *Black Prince*. The light cruiser *Chatham* was sent to watch the south end of the Straits of Messina, and four destroyers patrolled the waters between Sicily and Malta. These dispositions were approved by the Admiralty, and a special message drafted by Mr. Churchill was received by Milne late that night (August 2-3):

“Watch on mouth of Adriatic should be maintained, but GOEBEN is your objective. Follow her and shadow her wherever she goes, and be ready to act on declaration of war which appears probable and imminent.”

How the British battle cruisers were to “follow and shadow” a ship believed to be much faster than themselves was not explained.

Owing to the absence of communication with Lapeyrère, Milne was not informed that the French Staff now knew that the GOEBEN was at Messina with the BRESLAU. At 7 a.m. on August 3 he learnt that the German ships had been seen off the Gulf of Taranto, steaming south-west, which placed them outside the Adriatic. From such news as he had, he drew the conclusion that they were proceeding west, and with sound judgment ordered the *Indomitable* and *Indefatigable* to return from the neighbourhood of Catania, steam through the Malta channel, and search westward for them. With the *Inflexible*, the light cruiser *Weymouth*, and three destroyers, he took up a position in the Malta Channel and sent the light cruiser *Dublin* into Bizerta to open communications with the French.

At 8.30 that evening he received an order from the Admiralty to send the *Indomitable* and *Indefatigable* at high speed to Gibraltar, as it seemed probable that the *GOEBEN* intended to break out into the Atlantic and attack the British and French transports. The two cruisers were well on their way west, off the south coast of Sicily, when this order arrived, and they were now directed by wireless to increase to 22 knots. That same evening Lapeyrère sent off a message to Milne which never reached the British Admiral. It merely said that the French Fleet was protecting the passage of the troops and would be glad if Milne could watch "the entry to the Adriatic and Italian, Austrian and German movements."

As if the two commanders-in-chief had not enough trouble of their own, they were kept guessing about the attitude of Italy, after the Italian Government had made its choice and on July 31 had informed the British Ambassador in Rome¹ that it had decided to remain neutral. This important decision was not disclosed either to Lapeyrère or to Milne, though it would have greatly simplified the problem which they both had to solve. Not until 1.20 a.m. of August 4 did Lapeyrère know that war had been declared, so that there was great delay in sending on such all-important news from Paris. At 4.50 a.m. that morning a wireless message reached him from Bona in the extreme east of Algeria, stating that a German cruiser (*BRESLAU*) had appeared off the port at daybreak and fired sixty shells at it, killing two people and wounding six. A second German cruiser (*GOEBEN*) had similarly fired forty-three shells at Philippeville.

This news was taken in over a great part of southern Europe, but through one of the odd freaks of radiotelegraphy or some remissness it failed to reach Milne before 8.30. The French commander drew from the message the deduction that the German ships were coming west to attack the transports. At 5 a.m. he was 150 miles from Algiers, and at once with three of his best battleships increased speed to 16 knots which would bring him off that port about the same time as the Germans, supposing they were moving at 22. His eastern group of six battleships under Rear-Admiral Chocheprat was ordered to steam towards Bona and attack the Germans as quickly as possible. Only then were all fires lighted in the French ships, and even when it was definitely known that the Germans were off the Algerian

¹ Sir J. R. Rodd, *Social and Diplomatic Memories*, p. 208.

coast, no effort was made to use the fast French destroyers to find and attack them, nor were the submarines at Bizerta directed to take up a position between Cape Bon and Sicily.

At 7 a.m. Lapeyrère, after fresh calculations, decided that Chocheprat's squadron would miss the Germans and ordered it to steam for Algiers at its best speed. If Lapeyrère's original plan had been carried out, Chocheprat would have been in contact with the Germans two hours later and might possibly have inflicted enough damage on the GOEBEN to prevent her escape or at least delay her movements, though she was quite 6 or 8 knots faster than the French battleships. At 9 a.m. Lapeyrère learnt by wireless that at 6.40 a.m. a German cruiser had been sighted near Bona going north-east. The news was of great importance; it showed that the Germans had turned, and were no longer making for the western Mediterranean. It ought at once to have been transmitted to Milne, and to have been followed by the despatch of all the available torpedo craft from Bizerta to watch the waters between Tunis and Sicily. In actual fact, though Lapeyrère did not know it, the British were at this moment in contact with the Germans.

At 9.32 a.m. of August 4, the two British battle cruisers, *Indomitable* and *Indefatigable*, were steaming west, well clear of the African coast, when they sighted two warships, and speedily ascertained that they were the Germans. The news did not seem to have been signalled to the French who were not far away and whose arrival might have changed everything. The GOEBEN was not showing her admiral's flag and therefore no question of firing salutes arose. She altered course after the two British ships had come up, whereupon they did the same. They took station, not on her bows but on either quarter astern of her.

In this strange formation the three battle cruisers steamed eastwards. Each side trained its guns fore and aft, but each was ready to open fire at an instant's notice. At times the speed fell to 18 knots¹ but at 3 p.m. the GOEBEN and BRESLAU made an effort and increased speed. They drew slowly ahead while the pair of British battle cruisers dropped astern. The German course was directed towards the north coast of Sicily. Meantime wireless messages were passing. Captain F. W. Kennedy of the *Indomitable*, the senior officer, reported the position to Milne, who reported it to London, and an

¹ Personal information.

order was sent by the Admiralty to "hold" the GOEBEN and to engage her if she attacked the French transports, but to give her fair warning.

This was entirely impracticable, as the two British battle cruisers had no means of "holding" a vessel faster than themselves, except by attacking her. If Captain Kennedy was meant to attack her that word should have been used. The Cabinet refused to sanction even this instruction for "holding," meaningless as it was, and it was recalled and fresh orders were sent not to attack till midnight of August 4-5, when the time limit expired and war began. It was apparently supposed by the Cabinet that the British ships were fast enough to keep up with the Germans;¹ if so, the War Staff either cannot have been consulted or was badly informed. At 4.30 p.m. the GOEBEN and BRESLAU drew away and left first one and then the other of the battle cruisers. The British light cruiser *Dublin* which had appeared during the later hours of the long chase obtained touch once more with the Germans that evening and ascertained that they were steering for the north of Sicily before she again lost them. About 6.40 p.m. on the 4th Milne by wireless ordered the *Indomitable* and *Indefatigable* to steam at slow speed west.

This same afternoon at the suggestion of the First Sea Lord, Prince Louis of Battenberg, an order was sent to Milne not to allow any of his ships to come within six miles of the Italian coast. The order was not unreasonable, as it was important to show the utmost respect for Italian neutrality, and the Italian regulations claimed as territorial waters a distance of six miles from the coast. But the Straits of Messina ought not to have been included in this prohibition. Combatants, by the custom of the sea confirmed by the opinions of international lawyers as they were stated in the discussions at the Hague Conference of 1907, have the right of passage in war through straits connecting two seas. The effect of the order was to prevent the British Navy from using the straits while the German ships could do so. Milne did not protest or point out the risks involved; probably they were not yet obvious to anybody.

Milne at nightfall of the 4th knew that the Germans had got away from his ships, and had to begin over again the task of locating them. Another curious stroke of bad luck happened in the evening of the 4th. A wireless message

¹ According to Souchon the British speed did not exceed 22 knots while the GOEBEN did 23, though she had not been docked for ten months. The *Indomitable* was ninety stokers short and was very foul.

from the French Admiralty sent off at 8.45 p.m., stating that British cruisers had at 10 that morning been in contact with the GOEBEN, fifty miles north of Bona, never reached Lapeyrère, because of some negligence in the French flagship. Had he known he would probably have moved part of his battle fleet to the north end of the Straits of Messina.¹ As wireless messages were coming in from all kinds of places which suggested that the German cruisers were still in the western Mediterranean, the French Admiralty suddenly lost its nerve and that evening called on Lapeyrère to station a force of submarines on the coast of Provence to protect the seaboard against the Germans.

Milne was still in the dark about French movements, and, handicapped by the order closing the Straits of Messina and by the insufficient speed of his battle cruisers, had no easy task. The *Indomitable's* coal was running low and she put in to Bizerta to coal on August 5. He himself with the *Inflexible* and *Indefatigable* patrolled northwards from Bizerta towards Sardinia as everyone in both the French and British Fleets expected the Germans to come west. He sent the light cruiser *Gloucester* to watch the southern entrance to the Straits of Messina. At the entrance to the Adriatic was Troubridge with the four armoured cruisers (the *Black Prince* had now joined him) and most of the destroyers.

At 5 p.m. Milne learnt from intercepted wireless messages that the GOEBEN and BRESLAU were actually at Messina. This was strategically the worst possible situation for the British, who were not allowed to use the straits. If a French squadron had been ready to close the northern entrance the Germans would still have had an easy means of escape by keeping within Italian territorial waters and thus proceeding to the Adriatic and the Austrian bases. As there was no sign of life from the French command, Milne decided to place his two available battle cruisers (the *Indomitable* being absent recoaling) at the north end of the Straits of Messina.² He had hardly done so when the *Gloucester* reported by wireless that the German cruisers were coming out of the southern entrance. Milne, with the straits closed to him, had to make the enormous detour round Sicily to get upon their track.

¹ The straits run almost north and south, the north end leading to the west, and the south end to the east.

² If he had placed them at the south end there was nothing to prevent the Germans from steaming in Italian territorial water till they could join the Austrian Fleet.

The GOEBEN and BRESLAU arrived at Messina late on August 4, and at once set to work to coal. They were able to obtain fuel from a German ship, the GENERAL, and were required by the Italian Government under the twenty-four-hours rule to leave Messina not later than 7 p.m. of August 6. The orders which Souchon received from his Admiralty varied from hour to hour. Tirpitz late in the night of August 3-4 directed him to attempt to break through to Constantinople. But the Turks took alarm and did not want to throw off the veil of neutrality till their mobilisation was complete. On August 5 Souchon was told not to go to Constantinople but to proceed to Pola. On this the Austrians declared that they were as yet unready for naval war and that the appearance of the GOEBEN might have disagreeable results.

The decision where to go was ultimately left to Souchon and he showed an initiative and energy deserving of the highest praise. At 6 p.m. of August 6 he steamed out of Messina by the southern exit at about 18 knots and found to his surprise no sign of any Allied armoured ships. He was followed by the BRESLAU, and presently sighted the *Gloucester* which kept touch with him for several hours, reporting his position. Milne, when he learnt the Germans were going east, evidently considered Troubridge strong enough to bar their way, for he proceeded at moderate speed to Malta, where he coaled. Had he steamed east after them with his three battle cruisers, he had just enough coal for a fast run to the Dardanelles and might have caught them. He was never again in touch with them, though the Admiralty had now, much too late, withdrawn the prohibition on the use of the Straits of Messina.

There remained a chance that Troubridge's squadron of four armoured cruisers and eight destroyers might engage the Germans. An attempt by the *Dublin* and two destroyers to attack the GOEBEN in the night of August 6-7 failed because they could not find her. Troubridge, considering that his ships were unequal to fighting an action in daylight with a battle cruiser, abandoned his attempt to place his squadron on her course. The GOEBEN was in constant wireless communication with the Austrian Fleet which on August 7 put to sea at 8 a.m. and steamed towards Lissa and this factor may have added to Troubridge's anxieties.¹ Though severely

¹ *Oesterreich-Ungarns Heer und Flotte im Weltkrieg*, pp. 76-7. Cf. Conrad iv, p. 186.

criticised for his attitude by Mr. Churchill and by Milne, he was acquitted by court martial; and events at Jutland where the *Defence* was so rapidly destroyed go far to justify his decision.

It is possible that the four armoured cruisers might have damaged the GOEBEN, but it is much more probable that she would have gone off at once with her higher speed and without any immoderate difficulty she might have "sunk the lot." The *Gloucester* still maintained her chase of the Germans with admirable resolution; and at 1.35 p.m. of August 7 she even attacked the BRESLAU and fired a few shots, hitting her on the water-line. The BRESLAU returned the fire and the GOEBEN came to the light cruiser's aid, forcing the *Gloucester* off. Shortly afterwards the *Gloucester* was ordered by Milne to cease her pursuit at Cape Matapan and not risk capture or destruction.

The Germans were now far ahead of the British battle cruisers. They coaled at Denusa, east of Naxos on August 8, and by the evening of August 10 entered the Dardanelles, anchoring that night off Nagara under shelter of the Turkish forts. Milne had followed them eastwards on August 8 but had then, as the result of mistaken instructions from the Admiralty, turned off to face the Austrian Fleet. On August 9 he resumed the pursuit of the GOEBEN, and on the 11th received orders to blockade the Dardanelles.¹ On the 12th the Turkish Government professed that the two German ships had been sold to it and were now Turkish men of war. The farce had been arranged to keep the Allies quiet while Turkey completed her preparations. The Allies appear to have thought it wisest to make a show of believing in the Turkish Government's goodwill.

The escape of the two German ships was a disaster to the Allies. It was mainly due to the mistakes of the British and French Admiralties, complicated by an extraordinary series of accidents. Neither Allied Commander-in-Chief shone, though both were painstaking officers; but the history of Nelson's operations shows that the task of a naval commander in the Mediterranean is one of no ordinary difficulty. The French command remained passive throughout and employed the whole French Battleship Force in convoying the transports,

¹ According to Reventlow (*Einfluss der Seemacht*, p. 84) Milne could easily have forced the Dardanelles at this moment and destroyed the German ships. But that seems to the author doubtful in view of subsequent happenings and the Turkish mine defences. Some mines were already in position in June, 1914, to meet the risk of a possible war with Greece.

when it would have been quite sufficient to allot two or three battleships to each of the three convoys, and with the other nine or twelve vigorous action could have been taken against the GOEBEN.

The naval breakdown must be largely ascribed to the absence of close touch between the two naval commands and the two Admiralties before war. The plans which ought to have been worked out and concerted in time of peace could not be improvised at the last minute. Moreover, neither admiral knew exactly where he stood or what naval antagonist he might have to face. But had the GOEBEN been attacked and taken or sunk on August 4, it is doubtful whether Turkey would have persisted in making war on the Allies, and the whole course of history might have been altered. It can at least be said for Milne that at the critical moment he placed superior force in contact with the two baleful ships.

In the Mediterranean, the French Navy had the right of directing the naval campaign, but after the escape of GOEBEN and BRESLAU for many weeks no operations of any importance were attempted. The Austrian Navy held back in the Adriatic; Lapeyrère with a considerable fleet for political reasons, at the order of the French Government, made a demonstration off the Dalmatian coast and caught there the Austrian light cruiser ZENTA on August 16, 1914. She was sunk with a loss of 130 killed and 183 prisoners. In September eight antiquated French 6.2-inch and 4.7-inch guns were landed at Antivari for use against the Austrian forts at Cattaro, but these weapons were too weak to produce any great effect. As soon as they opened fire they were overwhelmed by the 12-inch shells of the ZRINYI (battleship of 14,000 tons, launched 1909) which were brought to bear from Cattaro by heeling the ship. An intermittent blockade of the Austrian coast was maintained by the French, who either coaled at sea, or used sheltered water on the Greek coast, but on two days out of three there was no watch over Cattaro. On occasions French submarines penetrated into that harbour but without result.

On December 21 the French Dreadnought *Jean Bart* (22,000 tons, twelve 12-inch guns, launched 1911) was torpedoed by the Austrian submarine U 12 (Lieut. Lerch). Hit near the bows, while steaming at 9 knots without being screened by destroyers, she was so much damaged that she had to retire for repairs to Malta, and was not again ready for sea till early in March. On December 20 the French submarine

Curie (Lieut. O'Byrne) attempted to make her way into Pola, and was caught in the obstructions which had been laid to entangle submarines. In spite of the most gallant conduct of her crew she was eventually compelled to surrender with the loss of two killed and several wounded, and became the Austrian submarine U 14.

Energetic operations against the Austrian coast were impossible without a naval base in the Adriatic and without troops, and neither France nor Serbia had any to spare. It was perhaps unfortunate that a serious effort was not made to capture Cattaro and its magnificent harbour while the Serbian Army was still intact.¹ To complete the record of the naval war in this sea down to the date of Italy's intervention, on February 24, 1915, the French destroyer *Dague* (700 tons, launched 1911) struck a mine and sank with the loss of 38 men; and in the night of April 26-27 the old French armoured cruiser *Léon Gambetta* (12,352 tons, launched 1901) was hit by two torpedoes which the Austrian submarine U 5 (Lieut. Trapp) fired at her.

She sank in ten minutes without having been able to call for aid by wireless. Out of her crew of 821, none of the officers and only 137 men were saved. As the ship went down, Rear-Admiral Sénès whose flag flew in her, saw, as he thought, signs of panic, and called to the crew: "Don't be in such a hurry; the boats are for you; as for us, we stay here," and all the officers followed his heroic example. It is quite certain that after the experience of the three *Cressys* and the *Hawke*, such a ship should never have been risked in slowly steaming to and fro at 6½ knots in the Straits of Otranto, unscreened and within easy reach of hostile submarines.

One result of the *GOEBEN*'s escape was that it was necessary for the British to maintain a superior naval force off the Dardanelles to meet her, if she came out. In command of this force was Rear-Admiral Carden, who had with him the battle cruisers *Indefatigable* and *Indomitable*, to which as the attitude of Turkey became more uncertain, were added the old French battleships *Verité* and *Suffren*. He had also two light cruisers, three submarines of B class, and twelve destroyers. When war with Turkey began on November 1, he was directed by the British Staff to bombard the Turkish

¹ As Thomazi points out, if Cattaro had been in Allied hands the German submarines would have been at a great disadvantage in the Mediterranean. *Adriatique*, p. 57.

forts at the entrance to the Dardanelles, keeping at a range where his ships could not be damaged. He fixed on November 3 for the bombardment, which was very similar in its character to that carried out by the Italians in 1912.

The four armoured ships took part in it and fired seventy-six rounds from their 12-inch guns. The effect was considerable: Sedd-el-Bahr and Kum Kaleh both appeared from a distance to have been reduced to heaps of rubbish and the main magazine in Sedd-el-Bahr blew up, killing sixty-four officers and men and wounding twenty.¹ All the guns in the fort were temporarily put out of action, but as a serious operation of war the bombardment was a failure. It led the Turks to strengthen their defences and thus ultimately harmed the Allies. Experience on the Belgian coast had shown the impotence of ships against even mediocre shore works, so that no favourable result was to be anticipated.

On December 13, the first British submarine success in this quarter was achieved by *B 11* (Lieut. N. D. Holbrook), an ancient boat of 300 tons. She succeeded in making her way up the Dardanelles past five rows of mines, and torpedoed the old Turk armourclad *MESSUDIEH* (9,120 tons) which sank in shallow water with a loss of 37 killed.² For this brilliant exploit Holbrook most deservedly received the V.C. On January 15, 1915, however, the French submarine *Saphir*, while going up the Dardanelles, had a complete breakdown which led to her loss, though all on board except her commander, Lieutenant Fournier, were saved.

The entry of Turkey into the war was precipitated by the *GOEBEN* and *BRESLAU* and by the influence of the German officers with Souchon while the Turkish Government was hesitating and sitting on the fence. There were moments when it seemed inclined to come down on the Allied side, but such feints of goodwill may have been merely to delay the outbreak of war till Turkey was ready for it. On October 29, 1914, vessels flying the Turkish flag appeared at four different points in Russian territory on the Black Sea and without any declaration of war,³ attacked the Russian Navy and its ports.

¹ Weniger, *Marine Rundschau*, xxx, p. 7.

² A number of the men on board her were imprisoned in one of the watertight compartments. Of them 23 were rescued by cutting through the ship's bottom. Bossert, p. 29.

³ This was a grave infraction of the Hague Convention, and the more treacherous because friendly negotiations were in progress between Turkey and the Allies. The Turks were warned that if the *GOEBEN* and *BRESLAU* entered the Black Sea, these two ships would be attacked by the Russian Navy.

At Odessa before dawn of October 29 two Turkish destroyers appeared and sank the old gunboat *Donetz* (two 8-inch and one 6-inch old type guns) with a loss of 30 men. They shelled the city and vessels in the harbour, causing several casualties among them. The old gunboat *Kubanetz*—a sister of the *Donetz*—finally drove them off by engaging them. The same morning the GOEBEN appeared off Sevastopol and shelled the naval base from a distance, but when her fire was returned and she sustained at least one hit, she withdrew. She encountered the Russian mine-layer *Pruth* and sank her. The *Pruth* was an old iron steamer of 6,480 tons, and had been used as a transport. Off Theodosia in the eastern Crimea the Turkish light cruiser HAMIDIEH showed herself and shelled that port for an hour.

As for the BRESLAU, she too was busy on that eventful day. She steamed to Novorossisk and destroyed there fourteen transports with large depots of oil and grain. Turkish officers who were sent ashore to demand the surrender of the place were seized by the Russians and made prisoners. It was afterwards ascertained that the orders for these attacks at so many points were issued by Souchon in combination with Liman von Sanders on October 27.¹ They were timed to coincide with a movement against the Sinai Peninsula and Suez Canal which began on October 28, and was on that day duly reported to the British Government. A fantastic account of his proceedings was given by Souchon in which he pretended that he had been attacked by the Russians, which was not the case. He alleged that while a number of Turkish ships were in the Black Sea, the *Pruth* with a number of torpedo craft appeared off the Bosphorus and tried to lay mines to cut the Turkish ships off. But the immediate result of his manœuvres was war, as he had intended from the first.

The Russian naval force at this date in the Black Sea consisted of seven old battleships, two small cruisers, eighteen destroyers and six effective submarines. Most of the ships were in poor order and three of them were required for coast defence, to act as floating batteries. The personnel of the Black Sea Fleet had for several years before the war been notorious for indiscipline, and had on two occasions broken out into serious mutinies. It was not then a very trustworthy force, though the gunnery of its ships was found by

¹ Cf. Liman von Sanders, *Fünf Jahre Türkei*, p. 45. Wath, *Breslau-Midilli*, pp. 36-7. Dönitz, *Fahrten der Breslau*, p. 26. According to Kirchhoff, *Seekriegsgeschichte*, p. 126, the *Pruth* was sunk on Oct. 28. So also Bossert, p. 25.

the GOEBEN to be distinctly good. There was no unit completed which could compare in gun power or speed with the GOEBEN. The three Dreadnoughts, *Empress Maria*, *Emperor Alexander* and *Catherine II* were not ready for sea and would not be ready for many months. Nor among their scanty number of cruisers had the Russians any vessels which could equal the BRESLAU or the Turkish protected cruisers HAMIDIEH and MEDJIDIEH which had steamed 22 knots. The Germans had thus a compact force of four fast ships which could raid the Russian seaboard as they liked without running the risk of being brought to action.

Notwithstanding this advantage in speed, and perhaps because speed is a less important factor in naval war than appears at first sight, the Germans were able to accomplish singularly little. Their operations were of a desultory character, and on the whole the Russians had the better of the encounters in the Black Sea. Thus the Turkish fast ships were not able to protect effectively the colliers proceeding from the Heraclea mines at Eregli to Constantinople, and the Turkish capital was reduced to sore straits owing to shortage of fuel. Nor were they able to guarantee the safety of transports and supply ships with food and ammunition for the Turkish troops concentrating on the Armenian front. There was an extreme shortage of ammunition until Bulgaria entered the war and opened communication by land between Berlin and Constantinople.

On November 18 a Russian squadron under Vice-Admiral Eberhart encountered the GOEBEN and BRESLAU off the Crimea. Eberhart had with him the old battleships *Zlatoust*, *Sviatoi Evstafi* and *Panteleimon*, pre-Dreadnoughts each mounting four 12-inch guns in two turrets, with numerous 8-inch or 6-inch guns. The German ships, having the advantage in speed, were able to fix the range and prevent a close encounter in which the heavier batteries of the three Russian vessels might have told. After several minutes of firing at a considerable distance the German ships retired. The GOEBEN, according to report, was hit by a 12-inch shell on her armour and suffered considerable loss in men. The Russian casualties were reported to be 34 killed and 24 wounded.

In January, 1915, the GOEBEN struck two Russian mines and she was several weeks before she was again ready for sea. In March, 1915, Eberhart demonstrated with all his available force off the Bosphorus mouth, in order to give some sort of moral support to the British attack at the

Dardanelles. On April 3 the elusive GOEBEN was once more off Sevastopol and was sighted and chased by Eberhart's squadron which was much too slow to catch her. The best of the Russian battleships was not good for more than 15 knots and the GOEBEN with all the defects in her boilers was able to do 18 or more. That day, however, the Turks suffered a severe loss in the sinking of the MEDJIDIEH. She struck a mine while cruising with the HAMIDIEH off Otchakoff and went down in shallow water. This loss seems to have discouraged further German activity for many weeks. The MEDJIDIEH was raised by the Russians who repaired her and added her to their fleet under the name of *Pruth*. The Russian position was much improved when towards the close of 1915 the first of their Dreadnoughts, the *Empress Maria*, joined their squadron, though she was not really in a state to fight a naval action till the following year.

At considerable intervals the GOEBEN, or a ship which was taken for her, appeared off the Russian coast, but she was not able to prevent the Russian Fleet from bombarding Varna, on October 23 and 27, 1915, after Bulgaria had entered the war. This operation was quite ineffective. The Russians were at no time strong enough to blockade the Turkish squadron in the Bosphorus, though they scattered many mines near its entrance. A condition of virtual stalemate therefore prevailed in the Black Sea, neither side being able satisfactorily to control the other.

A grave breach of the laws of war was committed by Lieut-Commander Gansser in U 33 on March 30, 1916. He barbarously sank the Russian hospital ship *Portugal* with two torpedoes near Batum, killing 100 wounded and fifteen women nurses. The *Portugal* bore the distinctive marks required and had been recognised by the Turks as a hospital vessel.¹ For this act Gansser was never punished; indeed he appears to have been promoted. It may have been U 33 that sank the old destroyer *Lieut. Pushtchin* on March 9. Early in 1916 the GOEBEN and the new Russian Dreadnought *Empress Maria* fired a few shots at one another at long range. The Russian ship proved to be distinctly inferior in speed, but she carried so much heavier a battery than the GOEBEN that the big German battle cruiser retired. Nor was the GOEBEN able to interfere with the Russian Fleet when it covered the movement of supply ships along the coast of Asia Minor bringing stores and food to the Russian force

¹ See Garner, 1, p. 506.

BATTLESHIPS IN ACTION

attacking Trebizond, or to prevent that Fleet from taking part in the operations against Trebizond on April 14 and 18, 1916. In July, after a long period of inactivity the GOEBEN and BRESLAU appeared off the oil port of Tuapse which the GOEBEN bombarded.

The first Russian Dreadnought that had been completed in the Black Sea, the *Empress Maria*, was speedily disposed of. A great fire of the kind that had destroyed the *Iéna* and *Liberte* in the French Navy and that led to the loss of the British ships, *Natal* and *Glatton*, broke out on board her at Sevastopol on November 20, 1916. There was a minor explosion on board and the fire reached her oil bunkers; her magazines were then as far as possible flooded and the vessel was sunk to avert a great explosion.¹ Three officers and 213 men were reported to have been killed, but the actual casualties are believed to have been much heavier, and it was generally believed that the fire had been caused by treachery. She was raised after the war in 1919, but could not be repaired.

In 1917 the Russian Black Sea Fleet, like all other Russian military and naval forces, showed signs of complete demoralisation as the result of the revolution. The Allies had to face the grave risk that the entire Russian Fleet, including a second Dreadnought, the *Alexander III*, which was completed early in the year, might fall into the hands of the Germans and the Turks. To guard against such a possibility the British Staff in 1918 sent the *Superb* and *Temeraire*, battleships to Lemnos, where they were joined by four French battleships of the *Danton* class. Whether the Germans had any real intention of utilising the Black Sea Fleet is not known; probably the shortage in man power, which was already being felt, would have prevented its employment as a German force. One of the new Russian Dreadnoughts, the *Catherine II*, was destroyed by Russian officers loyal to the Allies to avert such a disaster; and only the *Alexander III* eventually hoisted the German flag. She was in such poor order that much required to be done to her, and she was not ready for operations when the German and Austrian collapse came.

¹ Graf, p. 102.

CHAPTER XXXI

The Dardanelles Campaign—Its Difficulty—Mines and Forts—Purely Naval Attack Condemned by Naval Opinion—Ordered by the British Cabinet—Bombardment of Forts Begun—Entrance Works Silenced—Intermediate Defences Resist Attack—Heavy Losses of the Minesweepers—Attack in Force on Inner Forts Ordered—It Fails Completely—Three Allied Ships Sunk—Effect on the Forts—Naval Attack Formally Abandoned—Landing Force Sent—Disembarks with Fearful Loss—U Boats Appear—"Goliath," "Triumph" and "Majestic" Sunk—The Expedition Withdrawn—Allied Submarines in the Sea of Marmora.

When Turkey joined the enemies of the Allies an operation to open the Dardanelles undoubtedly offered great advantages if it could be carried through with success. But the evidence of history was all against its practicability with a force of ships alone. Duckworth in 1807 described this enterprise as "the most arduous and doubtful that ever was undertaken,"¹ and in a letter to the Russian admiral, Seniavin, stated that the co-operation of a land force was necessary. Hornby in 1877-78 viewed it with much the same eyes.² The British Committee of Imperial Defence considered a combined attack by Army and Navy in co-operation, in 1906, and decided after calm reflection that the prospects of success were not worth the risk involved.³ Similar was the judgment of the Italian Staff in 1911 and of the Greek Staff in 1912. When in 1915 plans were being considered, a former French attaché at Constantinople warned the Allies that a combined attack would be essential, and thought a landing on the

¹ James, *Naval History*, iv, p. 218.

² Egerton, *Sir G. P. Hornby*, pp. 216-18, 253.

³ Callwell, *Experiences of a Dug-Out*, pp. 87-8.

Gallipoli peninsula would be most hazardous because it had been thoroughly organised for defence.¹

Since the British demonstration in November, 1914, the batteries had been considerably strengthened and extensive new minefields had been laid. They were in February, 1915, extraordinarily formidable to ships, and the rapid current running at a speed of 2 to 5 knots would always bring floating mines down on vessels advancing up the straits. The coast at most points on the western shore of the straits is high, affording magnificent command to artillery. On the Asiatic side rises Mount Ida, covered except in summer with snow and surpassing in beauty. The total length of the straits is thirty-six nautical miles with several sharp bends which are difficult of navigation. The average width is three miles or more, but at Chanak it narrows to 1,400 yards, and at Nagara to 2,100, at which points it would have been easy to destroy ships with torpedoes fired from tubes ashore, if they survived the attack of artillery and the explosion of mines.

The defences² consisted of ten lines of mines which began at the level of Kephez and continued to a point above Chanak. They were protected by a series of works which had been constantly remodelled and improved and mounted very numerous guns, most of them of antiquated type with smoke producing explosives and projectiles of 1880 and 1890, but still capable of effective work against ships at short range. There were, however, about a dozen good modern guns with smokeless powder and a small number of modern projectiles. These guns had modern equipment and ranges of over 18,000 yards for the 14-inch weapons and 16,000 yards for the 9.4-inch ones. There were also mobile defences on either side of the straits consisting of good howitzers and field guns backed by machine guns. The permanent forts and earthworks were in three groups: (1) At the entrance were four 11-inch, four 10.2-inch, eight 9.4-inch, one 8.2-inch, and two 6-inch guns, mostly in old-fashioned masonry forts, besides smaller weapons. (2) The intermediate defences mounted eighteen 8.2-inch and thirty-four 6-inch howitzers besides five 6-inch high velocity guns with smaller weapons in profusion. (3) The inner defences at Nagara, the most powerful, mounted six 14-inch, six

¹ *Dardanelles Commission*, i, p. 32. The peninsula was also almost waterless, and much of it was covered with dense, thorny scrub, rendering offensive operations on a narrow front astonishingly difficult.

² See Table XXV.

11-inch, seven 10.2-inch, thirty-six 9.4-inch, six 8.2-inch, fourteen 6-inch, and numerous smaller guns with six 8.2-inch and seven 6-inch howitzers. The best of the 14-inch guns were five weapons of 35 calibres of 1889 model, firing 1,400-pound and 1,150-pound projectiles and weighing 70 tons. They were capable of causing immense damage to ships. At Kilid Bahr were three torpedo tubes firing 18-inch torpedoes, for which, however, only five torpedoes were available.

This mass of guns placed in works which were not easy to destroy by the fire of ships at long range, made it impossible to sweep up the mines, and the mines made it impossible to steam close to the forts or to attempt to run the passage, as Farragut might have tried to do and as Hornby actually had done in 1878, though then the Turks were on the whole in sympathy with England. No one who had actually observed at close quarters the straits and the batteries commanding them, or had examined the Gallipoli peninsula, could have any doubt about the stupendous difficulty of the undertaking in face of the fire from over 150 weapons of 6-inch calibre and upwards. It was certain, moreover, that the Turks would have the assistance of the ablest German artillerymen and every appliance which Germany could supply; and though the garrison in the Gallipoli peninsula was small, there were five divisions of good Turkish troops at hand. But the Turkish Army was completely ignored in all the preliminary discussions, and no one seems to have realised that it would be an essential factor in the struggle.

The surprising fact was that serious men ventured upon this enterprise of forcing the Dardanelles with ships alone, and those ships most imperfectly equipped, imagining apparently that somehow or other the British would "muddle through." The decision to deliver a purely naval attack was reached without any adequate examination and study, in face of the disapproval with which Lord Fisher, the First Sea Lord, was known by Ministers to view the project.¹ Experience obtained on the Belgian coast, where in repeated bombardments the British ships had not been able to make any impression, was ignored, though the Belgian works were in early 1915 less formidable than the Dardanelles forts. When the attack was ordered the plans were sanguine to a degree.

Yet able officers in the British Navy agreed with Fisher that the operation was foolish. Sir Percy Scott described

¹ *Dardanelles Commission*, I, p. 21 ff. Callwell, *op. cit.*, pp. 89-93.

it as "crazy,"¹ and Sir D. Sturdee held that it was impracticable. The junior Sea Lords of the Admiralty were ignored, perhaps because it was known that they shared these views. Sir H. Jackson, a distinguished and trusted admiral who was to succeed Lord Fisher as First Sea Lord, did not consider it feasible for a fleet to get through the Dardanelles and thought it "would be a mad thing to (try to) do."² Sir H. Oliver, the Chief of Staff, only agreed to the operation reluctantly. Unfortunately, however, none of these prominent officers spoke out with the necessary energy and emphasis.

One of the strange delusions which obsessed British Ministers and contributed to the attack was an overestimate of the power of the *Queen Elizabeth*.³ That fine ship had just been completed and carried eight 15-inch guns. It was known that the German and Austrian 16.5 and 12-inch howitzers had played a great part in destroying the defences at Liège, Namur and Maubeuge, and it was assumed that the *Queen Elizabeth's* 15-inch shells would be equally effective against the Dardanelles forts. But her projectiles were fired from high velocity guns, which could only attain an elevation of 22 degrees, and from a rolling, unsteady platform, whereas the German and Austrian howitzers, fired from firm platforms on land at known and exactly measured ranges, and their shells falling at a high angle searched out the hostile works. Howitzer fire from ships at long ranges has proved too uncertain to be of much value. At short ranges it was effective enough as operations in the Crimean War and American Civil War show. A further difficulty which was certain to arise was that naval artillery from its very nature and design is not only ineffective against forts and batteries but is also controlled by officers who have no special training in the business of attacking land works.⁴

The advocates of the operation assumed that the forcing of the Dardanelles would decide the war. But the Dardanelles had been forced in 1807 and Turkey had not collapsed.⁵ Constantinople was actually occupied by an Allied force in 1919-23, yet the Nationalist Turks refused to submit to the Allies. Sir H. Jackson thus described the dismal situation in which the Allied ships would find themselves, supposing

¹ To the writer before the great attack.

² *Dardanelles Commission*, I, p. 18.

³ *Dardanelles Commission*, I, p. 16.

⁴ Callwell, *Dardanelles*, p. 180.

⁵ Preparations were made to remove the Sultan in case the British forced the straits, *Marine Rundschau*, xxx, p. 60.

they forced a passage.¹ "They would be open to the fire of field artillery and to torpedo attack at night, with no store ships with ammunition, and no retreat without re-engaging the shore batteries, unless these had been destroyed when forcing the passage. Though they might dominate the city (of Constantinople) and inflict enormous damage, their position would not be an enviable one, unless there were a large military force to occupy the town . . . The actual capture of Constantinople would be worth a considerable loss; but its bombardment alone would not greatly affect the distant military operations; and even if it surrendered, it could not be occupied and held without troops, and would probably result in indiscriminate massacres." These reflections had occurred to the very able German general on the spot, Liman von Sanders²; and it is perhaps fortunate that he did not try the strategy of giving the Allied ships a "free pass in," and then closing the trap upon them in the Sea of Marmora.

The idea that the Allies could send munitions to Russia, and thus enable her to defeat the Germans decisively, was delusive, because at this date the Allies had no munitions to spare and on every front were dangerously short of guns and shells. Nor had Russia any reserve of troops with organisation and equipment to employ in an attack on Constantinople, which was the necessary complement to the forcing of the Dardanelles. It is true that a Russian force was told off for this purpose, and its absence at a crisis in the land operations may have been the factor which saved Hungary and prevented the Russian armies from advancing across the Carpathians on Budapest.³ "The little more and how much it is." Maritime communications with the Black Sea could not have been maintained, even after the occupation of Constantinople, without military occupation by Allied forces of the shores of both Bosphorus and Dardanelles. The culminating absurdity of the Dardanelles project was that, by Viscount Grey's subsequent admission, it aroused suspicion and did not inspire gratitude in Russia. The value of a good staff is that it smother's plans of the hasty kind which led to such misfortune at the Dardanelles, but in 1915 the Admiralty War Staff was a new and comparatively weak organisation, too much at Mr. Churchill's beck and call.

¹ *Dardanelles Commission*, i, p. 17.

² *Fünf Jahre Türkei*, p. 65. Enver Pasha was in no way alarmed and thought the risk would not be great if the Allies reached the Sea of Marmora.

³ Cf. Windischgrätz, *Vom Roten zum Schwarzen Prinzen*, p. 93.

The scheme of a purely naval attack was received with grave misgivings in France, and, according to Admiral Bienaimé, the French Staff was never consulted.¹

The British officer in command off the Dardanelles, when the attack was ordered in February, 1915, was Vice-Admiral S. H. Carden. By special arrangement with the French Government he was given the chief command of the entire Allied force. He had with him the battle cruiser *Inflexible*, needed to watch the *Goeben*, and the British pre-Dreadnoughts *Agamemnon*, *Triumph*, *Vengeance*, *Albion*, and *Cornwallis*, with a division of French pre-Dreadnoughts under Rear-Admiral Guépratte (*Suffren*, *Gaulois*, *Bouvet*). The *Agamemnon* and the French ships were fairly well protected for action with shore batteries, but as much could not be said of the older British ships, while the *Inflexible* was much too feebly armoured to engage powerfully armed forts. Besides these armoured vessels there were four light cruisers, sixteen destroyers and seven submarines (of which two were French). Seven mine-sweeping trawlers had arrived and fourteen more were on their way. But they were craft so slow that they were hardly able to move against the current in the Dardanelles, and their utility was consequently small. The *Ark Royal*, a British aircraft carrier, had with her six seaplanes which at that date had a restricted flying power (height of only 2,000 feet).

The new battleship *Queen Elizabeth* was on her way to join Carden, but of her he was permitted to make only a strictly limited use. She was not to be risked inside the straits nor to be exposed to torpedo attack or to the close range fire of the heavy Turkish guns. She was further not to wear her new guns severely. When she arrived, she proved to be suffering from turbine defects which were afterwards remedied, but at that date prevented her from steaming more than about 15 knots. The powerful pre-Dreadnought, *Lord Nelson*, a sister of the *Agamemnon*, was also on her way to Carden. As bases the Greek islands of Lemnos, Imbros and Tenedos were used by permission of the Greek Prime Minister, Venezelos. (Details of ships in Table XXVI).

At 9.51 a.m. of February 19 the attack opened with a bombardment of the forts at the entrance by the *Cornwallis*, *Triumph*, *Vengeance*, *Suffren*, *Bouvet* and *Inflexible*, joined later by the *Albion*. It was deliberate and was carried out at ranges of 8,000 to 12,000 yards. At 2 p.m. the ships closed

¹ *La Guerre Navale*, p. 181.

in and soon the outer forts on both sides were enveloped in clouds of dust and smoke, and looked from the ships in ruins. One 11-inch gun in Kum Kaleh was permanently put out of action.¹ Orkanieh had one of its guns hit on the muzzle and rendered unserviceable. But about 5 p.m. when the Turkish guns were apparently silenced, three batteries suddenly opened a violent fire on the *Vengeance*. The armoured ships replied with effect, till at 5.30 action was suspended. There was, it appeared, shortage of ammunition in the fleet, though the naval magazines in England had enormous stores of it; and further, the old guns of the old ships could not be unduly worn. Carden's conclusion from the day's work was that "the effect of long-range bombardment by direct fire on modern earthwork forts is slight."² In fact a direct hit had to be scored on each gun to score a certain "knock-out."

Next morning the attack could not be resumed. The weather became extremely bad—a common event at the Dardanelles, though the plans seem to have made insufficient allowance for such a possibility in the midst of winter; and whatever damage the ships had done on the 19th—according to Turkish reports it was not very serious—was made good. Meantime in London it was gradually becoming clear that troops would have to be sent to assist the Navy, but owing to difficulties which immediately arose in the matter of transport and munitions, there was muddle and delay, which, however, belongs rather to the history of the land than of the sea operations. On February 25 it was again possible to bombard, and at 10 that morning the *Queen Elizabeth*, *Agamemnon*, *Vengeance*, *Cornwallis*, *Irresistible*, and the three French ships opened fire. The *Queen Elizabeth* at this date had no high explosive shells for her 15-inch guns and her fire was comparatively ineffective, if imposing to observers at a distance.³ But by 3 p.m., after several hours of slow firing the batteries protecting the entrance (which were the weakest in the system of defence) were silenced; all the guns in the two most important works were for the time being put out of action; and a great deal of damage was done.

The first part of the operation had been a distinct success, but it was the easiest part as mines had not to be dealt with and the ships were not acting in confined waters. The

¹ *Marine Rundschau*, xxx, p. 58.

² *Dardanelles Commission*, I, p. 31.

³ Cf. Granville Fortescue, *Russia, the Balkans, and the Dardanelles*, pp. 226-7, 256.

Agamemnon was hit nine times and lost 3 killed and 8 severely wounded; the *Gaulois* was also hit and lost 9 killed with many wounded. Towards the close of the day the ships closed in to within 3,000 yards of the works, where not a shot was wasted. According to Captain Weniger almost all the guns in the forts were put temporarily out of action and nearly a third were permanently disabled.¹ No sign of activity could be detected in the forts. They seemed to have been disposed of.

Next morning the old battleships, *Triumph*, *Albion* and *Majestic* (which last had just joined Carden's squadron) steamed into the straits and engaged the intermediate defences while the sweepers got to work. Despite some appearance of initial success, both ships were attacked by some fifty heavy howitzers, 6-inch and 8.2-inch, firing from concealed positions on railways, and were recalled at 4 p.m., having made little progress, after the *Majestic* had received a hit below the water line. Landing parties from the ships on both the European and Asiatic sides destroyed several of the guns in the entrance forts. It is noteworthy that four of the six heavy guns in Sedd-el-Bahr were found intact after all the bombardment and were effectually disabled by one of the parties.

Once more on the 27th and 28th the weather intervened to prevent bombardment, and the Turks were given a respite, though on the 27th a British landing party destroyed six 6-inch mortars in Sedd-el-Bahr. On March 1 notwithstanding a gale which was blowing, the *Irresistible*, *Albion*, *Majestic*, *Ocean* and *Triumph* were engaged with the mobile guns and howitzers in the intermediate defences. The ships were repeatedly hit, and, if they did not suffer seriously, their fire was quite ineffective against the widely dispersed and well concealed guns ashore. In fact, against mobile artillery the modern warship was almost impotent, which might have been discovered from the actions on the Belgian coast. Moreover, the airmen who did their work with great courage notwithstanding the manifold defects of their machines, reported that the gun emplacements were fast growing in number. That night the trawlers which had just approached the outermost line of mines, came under a Turkish searchlight and were heavily shelled. The destroyers and the *Amethyst* went to their aid, but it was now clear that the task of mine-sweeping would be one of extraordinary difficulty.

¹ *Marine Rundschau*, xxx, p. 60.

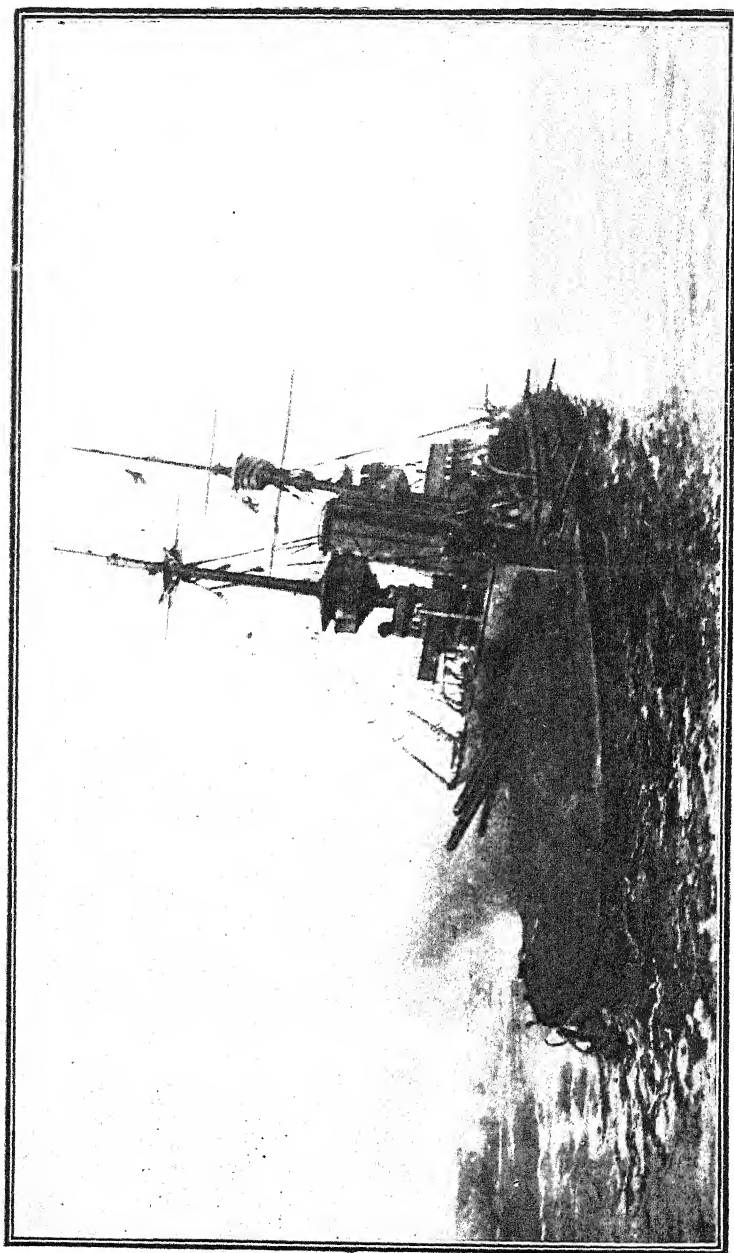
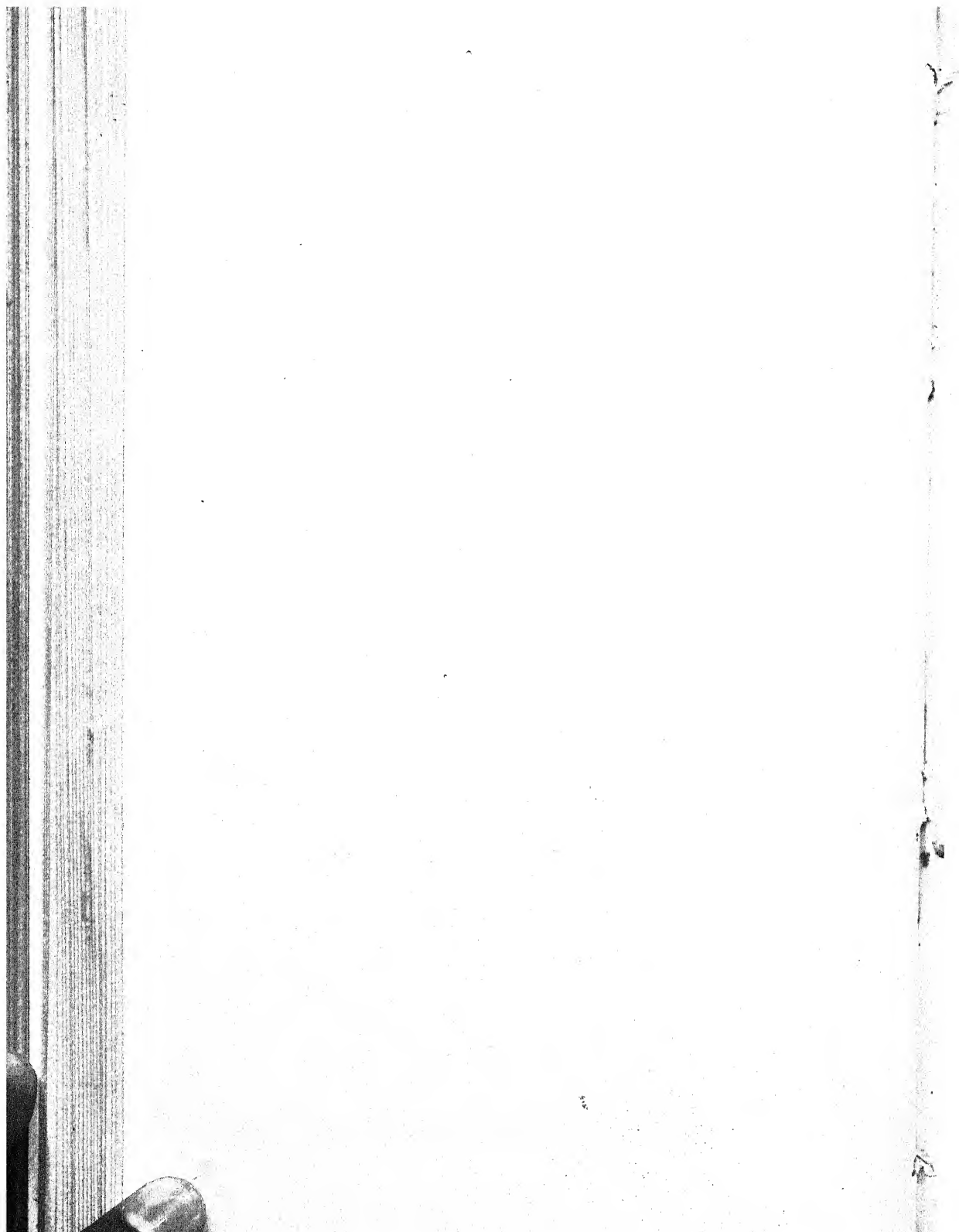


PLATE 46

THE BRITISH BATTLESHIP "IRRESISTIBLE" SINKING IN THE DARDANELLES

This was a snapshot, taken during the battle of March 18, 1915, while the *Irresistible* was being badly hit. She was an old vessel, launched in 1898, and was severely hit by the Turkish batteries before she struck a mine. The loss of life in her was small, but it is a dying ship in which men are dying that is shown here.



A demolition party landed at Kum Kaleh and found seven of the nine powerful guns which that fort contained untouched. Everyone supposed they had been destroyed by the ships' fire.

On March 2, another stormy day, operations within the straits were resumed. The battleship force had been strengthened by the old British ships *Canopus*, *Swiftsure* and *Prince George*, and the old French battleship *Charlemagne*. The whole morning was lost; fire was not opened till 2.20 p.m., and again there was little result. The *Canopus* was struck three times and most of the other ships received hits, though only 1 man was wounded. When that night the minesweepers attempted to work, they were driven off by a heavy and accurate fire. On March 3 the weather was thick and stormy so that nothing could be done beyond some sweeping in Morto Bay.

So far, it will be observed no attempt had been made to secure a spotting station such as 203-Metre Hill at Port Arthur, thus obtaining accurate observation and relieving the aircraft. No one seems to have thought of it, though on February 15 the Admiralty had advised the seizure of observation points ashore. Whether it would have been practicable to occupy Achi Baba, which rising to a height of over 700 feet commands a great extent of sea and land, is doubtful. Only a small force of men would have been available, and the Turks would certainly have attacked the observers with the utmost determination, as they had abundance of troops near. But in this affair of the Dardanelles everything from start to finish went wrong, perhaps because the warnings of history were so entirely disregarded. General Birdwood, who arrived early in March, was for the seizure, but the only troops then available were those of the 3rd Australian Brigade, and it was doubtful if they would have been able to hold the position against the large and well equipped Turkish force which would have at once been thrown against them. In every requisite the Turks at this date were better supplied than the British.

On March 4, 150 men were landed at Kum Kaleh to demolish the works but had to retire at nightfall with a loss of 17 killed, 24 wounded, and 3 missing, nor was a landing on the European side much more fortunate, though the casualties there were only 3 killed and 1 wounded. On March 5 began the attack on the inner defences. The *Queen Elizabeth* taking up a position on the western side of the Gallipoli

peninsula, fired over it at the great Hamidieh batteries, which mounted two 14-inch and seven 9.4-inch guns. The range was over 14,000 yards. "The folly and waste of time!" commented Commander Verner of the *Inflexible*. "The ship did not get her orders till 11 a.m. Then had to get into position and the best part of daylight had vanished before she began firing." Without accurate observation either from aircraft or ashore, the fire of old-fashioned black-powder shells from this ship promised little result. No seaplanes were available owing to casualties, and an attempt to use old battleships in the straits to spot was a complete failure. Moreover, the Turkish mobile guns opened a sharp fire on the *Queen Elizabeth*. The sole effect of the *Queen Elizabeth's* bombardment was to blow up a Turkish barrack close to one of the chief forts (Hamidieh II); neutral observers reported afterwards that her big shells did little damage.

On March 6, the *Queen Elizabeth* once more attempted from outside the straits to bombard one of the Chanak forts, but the ships spotting for her immediately came under the fire of invisible guns and she could do nothing. Her efforts only brought on her a heavy fire from the concealed Turkish guns and produced no result. Actually she was attacked by the old 11-inch guns of the Turkish battleship *BARBAROSSA* at extreme range and ran some risk from the high-angle fire. "We are slowly collecting hits and casualties," was an able British naval officer's verdict on the proceedings.¹ He held that much time was wasted by not giving the ships their orders sufficiently early so that they could begin firing when the day was young. In the afternoon there was generally a mirage and the atmospheric conditions were unfavourable. The old ships shelled a battery opposite Chanak, but at night-fall, when the trawlers attempted to sweep, they came under a violent and accurate fire.

On March 7 the *Agamemnon* and *Lord Nelson* supported by the French ships attacked the batteries on either side of the Chanak narrows. The Turks replied vigorously and hit the *Agamemnon* with a 14-inch shell which struck the armour deck astern and wrecked the wardroom and gunroom. Salvoes of four 9.4-inch shells were fired at her with alarming accuracy. The forts appear to have sustained no serious damage though they were hit. The ships were repeatedly struck by small projectiles, and the *Lord Nelson's* captain was wounded by splinters which drove into the conning

¹ Verner, p. 57.

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tower. The *Lord Nelson* was also struck below the water-line and had two compartments full. At night attempts to sweep through the Kephez minefield failed because the trawlers had not sufficiently powerful engines to face the strong current. Extraordinary to relate, though the expenditure of ammunition had been ludicrously small in comparison with what was afterwards used in France, shells were running low.

On March 8 to Fisher's extreme anxiety, as he feared that a precious ship might be badly damaged or lost, the *Queen Elizabeth* was taken up the straits to fight the Chanak batteries, quite without result. The attack once more opened late and the light was bad so that she could do little and herself offered the Turks a good target. But though most of the officers and men on the spot were beginning to believe that the operation was impossible without the support of an army ashore, Carden at this juncture was given urgent instructions from the Admiralty—to force a passage bringing his maximum of strength into play. He was told that the very modest degree of success already obtained would justify the loss of ships and men. In preparation for a great attack the Bulair lines were bombarded to divert the Turks' attention, and determined attempts were made to sweep the minefields. In the night of March 10, however, one trawler was sunk by a mine and the others found themselves under a terrific fire, so that they had to withdraw.

On March 11 the attempt was repeated, when the trawler captains declared that they could and would do no more. These men afterwards showed the greatest bravery, but there are limits beyond which human beings cannot be tried, and the hopelessness of the business was becoming clear to them. A fresh attempt was made in the night of March 14 with volunteers from the fleet in the trawlers. It had no better result. Four trawlers were put out of action and the light cruiser *Amethyst* was badly hit, with a loss of 27 killed and 45 wounded. She steamed up to about the level of Kephez Point, supporting the minesweepers, before her steering gear was put out of action by an accurate Turkish fire. For twenty minutes she remained a helpless target, but at the end of that time she was again got under control and came down signalling for immediate medical help. After this affair thirty powerful trawlers were ordered by the Admiralty from England to replace vessels which were disabled or too weak for the work, but the reinforcements were doomed to come too late.

On March 16 Carden's health broke down and he was invalided to Malta. The conduct of the operations passed to his second in command, Vice-Admiral J. M. de Robeck, who was on the spot and familiar with all the conditions. He had to consider whether he should make the great attack which Mr. Churchill had ordered, and finally decided to do so. His object, however, was not clear, for he himself was convinced that even if the fleet got past the forts, it could not stop in the Sea of Marmora, nor could transports follow it.¹ "We were told," he afterwards said, "to bombard the forts and so we did"; if the forts had been passed, "we should have had to come down again." But according to Sir Ian Hamilton, de Robeck was "sure" he could force a passage.²

The Allied force at this date consisted of eighteen armoured ships. Besides the *Queen Elizabeth* and *Inflexible* there were sixteen pre-Dreadnought battleships (Table XXVI), most of them armed with four 12-inch guns apiece in two turrets, in addition to numerous quickfiring smaller guns. Two of the old ships, *Canopus* and *Cornwallis*, were held in reserve. The morning of March 18 was brilliant, but not till 11.30 did the fighting begin with a heavy and continuous fire from the Turkish mobile artillery. By the plan of operations, the four most powerful ships, *Queen Elizabeth*, *Inflexible*, *Agamemnon* and *Lord Nelson* were to steam in line abreast, flanked on either wing by an old battleship, towards Chanak, and at 14,000 yards to batter the forts. As soon as an impression had been made the older ships were to advance to close action. All ships were to keep in motion, as the fire of the Turkish smaller guns and howitzers rendered it impossible to anchor without great risk.

The smaller Turkish guns once more proved excessively troublesome. The *Agamemnon* was attacked by four 6-inch howitzers which hit her twelve times in half an hour, doing a good deal of superficial damage. The *Inflexible* fared even worse. One of the legs of her fore tripod mast was struck and the fore bridge was set on fire; the ship received many other hits, one of which put the fore-top and fore-control out of action, killing 3 men and wounding 6 officers and men, who were in mortal peril of being burnt to death. Among the fatally wounded was that brilliant officer, Commander Verner. The ship was forced to drop back to put out the fires and get the wounded down—a work of extreme difficulty

¹ *Dardanelles Commission*, i, p. 36.

² *Gallipoli Diary*, i, p. 23.

and danger—but as soon as this had been done she returned to the fight. She was again heavily hit; and at 4 p.m. she received an injury which all but proved fatal to her.

This injury was inflicted by a mine which blew in the side at the level of the fore torpedo flat. It killed or drowned 29 men and caused so much damage that she had to leave the line with 2,000 tons of water in her. She was heavily down by the bows and was in such a state that destroyers and the cruiser *Phaeton* had to stand by her, in case of a disaster. She was only got to Malta subsequently with extreme difficulty. But at 12.6 the forts appeared to experienced observers in the ship to be much knocked about. From subsequent German and Turkish statements it is known that many of the guns had been choked with sand and earth thrown up by the British shells, and had been at least temporarily silenced. The minefields, however, remained. The old ships steamed forward to attack at close quarters, when the Turkish fire suddenly and unexpectedly blazed up. The *Gaulois* was repeatedly hit and though her loss of life was small, she was much damaged, and forced to retire with a serious list amidst an attendant crowd of destroyers. About 2 p.m. the *Bouvet*, which had already been repeatedly hulled by Turkish shells, and twice in particular by 14-inch projectiles, was severely hit. It is possible but not certain that she struck a mine. A magazine in her blew up and she went down, taking over 700 of her crew with her.

The Allied ships, though no one was then aware of it, had run into a new minefield of twenty mines, which the Turks had cleverly laid on March 8¹ in the water cleared by the Allied minesweepers and thought to be safe, exactly in the track generally followed by Allied ships when bombarding. At 3.14 the *Irresistible* was seen to be heavily hit and at 4.15 she struck one of these mines. The loss of life in her case was not great; her crew were removed with only 20 men missing or dead, though before the mine disaster she had been severely hit and both her turrets had been put out of action. "It was like a gigantic shovel throwing huge lumps of coal on a flameless fire, from which belched out thick black smoke," said an observer of the fire to which she was subjected.² As evening approached the fleet was ordered to retire when a fresh disaster took place. The *Ocean* struck a mine after she had been a good deal damaged by

¹ *Marine Rundschau*, xxx, p. 67.

² *The Immortal Gamble*, p. 49.

gun fire, and she too had to be abandoned in a sinking condition, but without heavy loss of life. Next morning both the *Ocean* and *Irresistible* had vanished, having been sunk by Turkish fire as they drifted in the straits.

Thus the attack was a complete failure. The Allied loss, out of a total of sixteen armoured ships engaged, was three sunk by mines, (*Bouvet*, *Irresistible* and *Ocean*) and three more, (*Inflexible*, *Gaulois*, *Suffren*) so badly damaged by gun fire or mines that it was doubtful whether they would be able to reach the nearest Allied dockyard at Malta. The *Gaulois*, indeed, had to be temporarily beached on Rabbit Island, and her injuries hastily repaired there, or she would have foundered. But even this did not exhaust the tale of mishaps. The *Charlemagne* had a stokehold full of water; the *Agamemnon* had a 12-inch gun disabled; and the *Albion* had her fore turret out of action for some days. The cause of the loss of the ships which were sunk was not known at the time but was supposed to have been drifting mines or torpedoes fired from the tubes ashore. Even now it is not quite certain whether the ships which went down were destroyed by the new Turkish mine field or by the heavy guns in the forts, which were seen by Germans on the shore to be hitting them repeatedly.

The Allied casualties in men were considerable but were concealed after the official practice of those days. They must have approached 800 killed, wounded and drowned, for of the *Bouvet's* crew of 800 only 61 were saved and the British loss, so far as it was returned at all, was at least 61 killed and wounded. The Turkish loss is stated by a competent German authority¹ at 24 killed and 79 wounded, or about one-eighth the Allied casualties.

The effect on the forts was considerable, but much less than the Allies supposed at the time. The three main Turkish forts fired 205 heavy armour-piercing shells—79 from Fort Hamidieh I, 93 from Fort Rumeli, and 33 from Fort Namazieh. They had only 88 rounds left for the heavy 35-calibre guns after the engagement, but this was of modern ammunition; of projectiles of ancient type they had a fair supply. Moreover, the 22-calibre guns, which would have been dangerous to ships at close quarters despite their low ballistic qualities, had also a considerable supply of shells and other projectiles. In the forts only three heavy modern guns were put out of action, but among them were two of

¹ Weniger in *Marine Rundschau*, xxx, p. 110.

the six Turkish 14-inch weapons, both apparently hit by the *Inflexible*.¹ Three hits by 15-inch shell on the Hamidieh I Fort pierced the traverses, and one of these hits caused a dangerous fire in the munitions which all but destroyed the fort.²

In the opinion of Weniger a great mistake was made by the Allies in not closing with their four most powerful ships to 8,000 yards, when every shell would have told. The real difficulty, however, was that the ships could not have closed, without running into the mine fields when they would almost certainly have been put out of action. At 14,000 yards their fire was not so effective as it ought to have been. A good deal of damage was done to the structure of the forts and the guns were buried in masses of sand which silenced most of them temporarily. He suggests that the Allied operations were throughout wanting in energy and persistence; and apparently does not think it was at all impossible to force a way into the Sea of Marmora. But he persistently minimises the danger to the ships from the large mine fields.

There were in all ten lines containing 350 mines which had not been swept up, and which were protected by the fire of the small guns. These small guns, according to Weniger, had no great effect on the ships, but those who were exposed to their fire in the Allied Fleet were of a very different opinion. It is possible that the operation would have had more chance of success if it had been undertaken in April, when the weather at the Dardanelles is generally finer, and when there would have been less probability of interference from storms. Had the straits been forced, arrangements were made by the Germans and Turks to deal with any Allied ships that entered the Sea of Marmora, so that no decisive result was to be expected.

The purely naval attack was not repeated because de Robeck very speedily came to the conclusion that it offered no prospect of success. An order from the Admiralty to renew it was prepared by Mr. Churchill, but Fisher intervened to prevent it from being sent, and finally a message was despatched, leaving the matter to de Robeck's judgment. De Robeck replied pointing out that "this assumption (that gunfire alone was capable of destroying forts) has been conclusively proved to be wrong, when applied to the attacking

¹ See Verner, p. 62.

² Bossert, p. 42, gives an account of the state of this fort.

of open forts by high-velocity guns,"¹ and he also pointed out that the "mine menace" was "much greater than we expected."² On March 23 the naval attack was formally and officially abandoned because of difficulties which should have been foreseen before the enterprise was ever undertaken. It is conceivable that if the operation had been carefully examined and planned beforehand, if ample supplies of ammunition had been allowed to the ships, and if a strong force of powerful minesweepers had been provided at the outset, the straits might have been passed. Had the paravane existed in a practical form in March, 1915, it might have enabled the battleships to steam through the mine fields, though subsequent tests showed that, to be safe against drifting mines, a vessel must proceed at a speed over 12 knots, and it is not certain that in narrow, difficult waters with several turns such a speed could have been maintained by old ships against the strong currents. Even if the straits had been forced, as has already been noted, the effect of the blow would probably have proved much less than was anticipated by such sanguine thinkers as Mr. Churchill.

In the Japanese operations against Port Arthur, Wei-hai-wei, and Tsingtau, care was always taken to land at points where opposition was not to be expected while the troops were in the act of disembarking. In none of these cases did Japanese ships attempt seriously to engage land forts; such bombardments as took place were to hold the attention of the garrisons. In the earlier landings and naval attacks on forts the danger of mines had never to be faced; yet the example of Charleston had shown how difficult it was for well armoured ships to silence a moderate number of guns ashore.

"Damn the Dardanelles! They will be our grave!" wrote Fisher³ to Mr. Churchill, and the old man's instinct was right. He feared the diversion to that secondary point of force that was needed for safety in the North Sea, as he had by this time reached a very just appreciation of the extraordinarily formidable character of the German Fleet. As for the landing expedition which was beginning to arrive when the unsuccessful attack on the Narrows was made, the transports conveying it were loaded on the assumption that the troops would only be needed in handfuls to occupy the Turkish forts as they were silenced and passed by the warships; guns

¹ Churchill, ii, p. 241.

² *Dardanelles Commission*, i, p. 38.

³ Churchill, ii, p. 303.

were in different vessels from their carriages and wagons (of which there were few) from the horses. The transports, before a landing of the whole force could be attempted, had to be taken to Alexandria and re-stowed, so that the Turks were given a whole month's time to prepare for the attack which was the one subject of conversation and rumour in the Middle East. This was a fresh example of the want of foresight and method which characterised the disastrous Dardanelles campaign.

On April 25 the landing took place on both shores of the straits, the British disembarking to the north and the French to the south, though the French landing was only meant as a demonstration to draw off Turkish forces and prevent artillery at Kum Kaleh from shelling the British in their disembarkation. "Asia is out of bounds," Kitchener had told the commander of the Allied forces on land, General Sir Ian Hamilton, thus signally hampering the operations. Examining the terrain at close quarters, Hamilton noted that the Gallipoli peninsula "looks a tougher nut to crack than it did on Lord K's small and featureless map." The coast stood up steep, and at many points was precipitous; the glitter of barbed wire could be seen about "the spider's web of deep, narrow trenches" which protected the Bulair isthmus. Because of the strong fortifications there any idea of an attack at Bulair was dropped; but Kitchener had been quite certain that from Kilid Bahr to Cape Helles, "the peninsula is open to a landing on very easy terms." The ground, he maintained, would be swept by the fire of the ships in the Aegean and in the straits. But long before April 25 this was known to be completely wrong—so completely wrong that no attempt was made to disembark along this stretch of difficult country.

As the day broke over those sombre mountains which were to see such tragedy and which had looked down for thousands of years on so many comings and goings of mortal man, the landings began. They were accompanied by a bombardment of the Bulair lines, carried out by a detachment from the Allied Fleet, to give the Turks the impression that the main attack was to come there, and they were covered by the fire of the Allied Fleets, as well as could be. A large naval force was employed, organised in six squadrons, one of which was sent to Bulair. It included, in addition to the *Queen Elizabeth*, eighteen old battleships (three of them French), thirteen cruisers (three of them French) and light cruisers,

twenty-seven destroyers, five torpedo boats, and over thirty trawlers and mine sweepers. A transport, the *River Clyde*, was specially prepared for running ashore at one of the chosen beaches, whence her men were to land direct on the shore. Eight large ports were cut in her side, and a steam hopper was towed alongside, fitted with a brow to drop on the shore. Three lighters were also towed, in case this improvised bridge proved too short. Otherwise the method of disembarkation was for steam pinnaces and trawlers to tow boats laden with men. The British landed at seven points from north of Gaba Tepe to Morto Bay. At 5 a.m. the sound of heavy firing was heard and about that time land and sea woke to battle.

Opinions differ as to the value of the ships' fire in covering the landings. The German commander speaks of the "quite extraordinary support" which the ships' guns gave,¹ but the bombardment from the sea could not keep down the murderous fire that was concentrated on the landing parties from the Turkish entrenchments. The ships were almost powerless against concealed guns and howitzers. To land on coast in the actual military possession of an adversary, who has prepared and fortified it, is shown by the whole course of history to be a desperate undertaking, which has very rarely succeeded.

Yet at most of the landing points the British established themselves, however uncertainly. Cruel loss, however, was suffered in connection with the *River Clyde*, because the hopper and the lighters broke adrift and did not enable her men to reach the shore without terrible casualties. A little armoured protection if provided in them might have saved hundreds of lives.² The net result was that after prodigies of heroism and the loss of 18,000 men, the 50,000 surviving Allied troops found themselves in precarious positions, held in a trench war by 30,000 Turks. The land campaign took on as hopeless a prospect as the purely naval attack, perhaps because the best strategic landing point for the Allies (in the judgment of Liman von Sanders), the Asiatic side, was excluded by Kitchener's orders.

Fisher's anxiety grew when the Navy became responsible for the communications and supplies of the considerable force which had been thrown ashore on the inhospitable mountains of the Gallipoli peninsula, and when the radius

¹ *Fünf Jahre Türkei*, p. 94.

² An eyewitness thought that most of the loss would have been averted if she had had a disembarkation port cut in her stern, and boiler plate protection to her gangways and the lighters. Weldon, *Hard Lying*, p. 69.

of U boat activity extended to the Mediterranean. There was one anxious moment on April 27 when a large Turkish ship, supposed to be the *GOEBEN*,¹ appeared in the Narrows and seemed on the point of coming out; the *Queen Elizabeth* accordingly fired at her indirectly over the Gallipoli peninsula, but at the first shot the vessel retired. During subsequent days the Turkish Navy again intervened, firing with effect at the Allied positions. On April 28 the Russian army corps, which had been embarked and held ready to move to Constantinople, was landed at Sevastopol, and its presence was very shortly required in Poland. The Russian Admiral Eberhart was as active as could be desired with the Black Sea Fleet, bombarding the Bosphorus forts at long range on April 25 with all his force and renewing the bombardment on May 2 and 4. But the opening of the Bosphorus was a task far beyond his power.

On May 13 at 1.17 a.m., the Turkish destroyer *MUVANET-I-MILER* discharged three torpedoes, hitting every time the old battleship *Goliath* in Morto Bay and sank her at once, blowing up her magazines. The Turkish vessel commanded by an able German officer (Firle) stole down in the darkness under the European shore to within 100 yards of her quarry and escaped untouched from the fire which was opened on her too late. The loss of life was grievous; of 750 officers and men only 183 were saved; but what was even more serious was the sense of insecurity, which the attack inspired. Fisher at once, and quite rightly, insisted on the recall of the *Queen Elizabeth*. Worse was to come. On May 25 U 21 (Hersing) was off the Dardanelles and off Gabe Tepe she torpedoed the old British battleship *Triumph* which sank in ten minutes with a loss of 71, though the *Triumph* had her torpedo nets out and was screened by two destroyers. On May 27 the same submarine sank the old battleship *Majestic* at Cape Helles with the loss of 48 lives in seven minutes. The Dardanelles expedition was in danger of being left in the air, with submarines behind it and Turkish forces which it could not dislodge in its front.

Special measures, however, were taken to meet the U boat danger with remarkable ingenuity and success. The number of trawlers was increased; the destroyer flotilla was greatly reinforced; monitors, which from their light draught were comparatively safe from torpedo attack, and old ships fitted

¹ Liman denies that she ever came to the Dardanelles (p. 92). The ship was probably the *BARBAROSSA*.

with a "bulge," were sent out to co-operate with the land forces; the harbour of Mudros was protected with nets and mines, and the German submarines obtained no more successes in this quarter of the world against battleships. The threat of U boat attack, however, cramped the strategy of the August operations and prevented any blow at the Bulair isthmus, but it did not prevent fresh British disembarkations in force at Anzac and Suvla Bay early in August, 1915, in which the motor lighters built by Fisher for use in the Baltic proved of great value.¹

Bulgaria's decision, definitely reached in August, largely as the result of the blunders and defeats in the Dardanelles operations and the great German successes in Poland, finally destroyed any possible hope of victory at Gallipoli, as it meant that the Bulgarian forces would be added to the Turks. But not until December, 1915, was the British War Cabinet able to make up its mind to evacuate any of the positions captured. On December 20 the last troops were withdrawn from Suvla Bay without loss, through the brilliant arrangements made by the naval and military commands which achieved their masterpiece in these closing acts of a disastrous campaign. In the early morning of January 9, 1916, the yet more difficult feat of evacuating the Allied lines at the tip of the peninsula was carried out with equal skill and success, and the brown desolate mountains were left by the British to their enemy and their dead. The Allies were at last relieved of their gravest entanglement in the whole war, just as a strong force of heavy artillery had reached the Turks, which would have made the Cape Helles position quite untenable.

The failure of this expedition was due to divided councils, and insufficient preparation and forethought. "Never in the history of the world," wrote one of the admirals engaged,² "has such an expedition sailed, never has a big campaign been so hastily organised and got together and never has such an undertaking had so little consideration given it from home." No one in England seems to have grasped the practical difficulties that were certain to arise or to have realised that the main strength of the Turkish Army would have to be defeated before any serious effect could be produced. The evidence of history was neglected and it was apparently assumed that the Dardanelles forts would fall,

¹ Cf. *Liman von Sanders*, p. 102.

² Lord Wester-Wemyss, pp. 69-70.

as did the walls of Jericho of old, to the sound of trumpets. Kitchener's instructions to the army which was to occupy Constantinople betray signs of this naïve delusion. Among the local factors which prevented success were the want of adequate space in which to provide for all the necessities of a great army on such a waterless, inhospitable stretch of territory as the Gallipoli peninsula, and last but not least the lack of a good harbour on which the troops could be based.

The British submarines were strenuous in efforts to interfere with the Turkish communications in the Sea of Marmora. The feat of passing up the Dardanelles was one making extraordinary demands on the skill and nerve of officers and men, but it was repeatedly performed. The actual effect on the Turks, however, appears from Liman von Sanders's work to have been quite inconsiderable,¹ while the casualties of the Allied submarines were serious. On April 17 *E 15* (Lieut.-Commander T. S. Brodie), while going up, ran aground and was disabled with a loss of 7 killed and the rest of her crew were captured. It was important to prevent the Turks from floating her off and using her; and though she lay under the guns of a fort she was torpedoed and most gallantly destroyed by a British picket boat on the following night. On April 27 *E 14* (Boyle) went up, successfully sinking an old torpedo gunboat on her way, and on April 29 she sent to the bottom a Turkish transport and on May 1 a small minelayer. *AE 2*, one of the two Australian submarines, went up at the same time, but after a sharp fight was sunk by an old Turkish torpedo boat, though all her crew were saved.

On May 1 the French submarine *Joule* struck a mine and was lost with all on board. *E 11* (Nasmith) was, of all the British submarines, the most successful, sinking several small vessels, and on May 21 torpedoing a gunboat off the Bosphorus. On August 8 she hit the old Turkish battleship *BARBAROSSA* and sank her, with most of the Turkish crew of 580. She also torpedoed and badly damaged a transport which beached itself, and was destroyed on August 12 by the first use of a new weapon, a torpedo released from a seaplane by Flight-Commander C. H. K. Edmunds. On July 29 the French submarine *Mariot* was caught in the Turkish nets and her crew captured; on September 4 the same fate

¹ p. 97.

overtook *E 7*, her crew also being taken. On October 30 the French submarine *Turquoise* ran aground and was captured in the Sea of Marmora and in her was found information about a rendezvous where she was to meet the British *E 20*, which was also then up the straits operating. The Germans sent UB 14 to the rendezvous and, when *E 20* appeared, torpedoed her, killing all on board except the commander and 8 men.

E 11 was the last boat to cruise in the Sea of Marmora and when, after a month's operations, she repassed the straits in December, the Gallipoli adventure was on the eve of abandonment, but the British submarines had between them sunk over fifty vessels. UB 14 was one of a number of small submarines (127 tons surface displacement) which had been sent in sections by rail to Pola, and after being put together there, crept round through the Aegean to Constantinople. On October 27, 1915, the day on which Eberhart with a Russian squadron including one of the new Dreadnoughts bombarded Varna, one of these boats, UB 7, claimed to have torpedoed the old Russian battleship *Panteleimon*, which survived the attack. The UB boats caused a good deal of annoyance and loss in the Black Sea by occasional sinking of merchant ships.

An operation connected with the Dardanelles undertaking was the blockade of Smyrna, preceded on March 5-8, by a four days' bombardment of the forts, carried out by Vice-Admiral R. H. Peirse with the old battleships *Triumph* and *Swiftsure* and the armoured cruiser *Euryalus*, with indifferent success though their casualties were only 1 killed and 7 wounded. The batteries could not be approached closely owing to the minefields, and the minefields could not be destroyed owing to the batteries. On the 9th a passage was cleared to within 3,000 yards of the chief fort and negotiations were opened with the Turkish Governor which led to nothing but a dubious truce.

Meanwhile a small Turkish torpedo boat, *TIMUR-HISSAR* (built 1906, 97 tons) stole out of the Dardanelles and after firing torpedoes unsuccessfully at the *Triumph*, torpedoed and temporarily disabled off Smyrna the British seaplane carrier, *Anne Rickmers*, on March 11. This same boat on April 16 attacked the British transport *Manitou* off Scyros unsuccessfully; owing to a panic among the troops on board, when the boats were being lowered, 51 men were drowned. The *TIMUR-HISSAR* was chased almost immediately by

British destroyers and driven ashore in Greek territory in Chios.

In the campaign against Turkey Allied naval forces co-operated with the British troops on land in defending Egypt and holding the Suez Canal. The land force available consisted of no fewer than five British and Indian divisions; the attacking Turkish force was actually not more than 15,000 men, or one-fifth the defending force. The troops had the support of the warships, *Swiftsure* at Port Said, *Ocean* at Suez, *Requin* (French coast defence ship, two 10.8-inch guns) in Lake Timsah, *Minerva* and *D'Entrecasteaux* (cruisers), *Clio* (sloop), *Hardinge* (Indian marine armed transport), six old torpedo boats, various armed tugs and launches, and the armed ship *Himalaya*. Nevertheless on February 3, 1915, a number of Turks crossed the canal, south of lake Timsah, and their artillery did considerable damage to the *Hardinge*. The attack was repulsed with heavy loss, but in view of the enormous superiority in numbers of the British, the Turkish troops ought never to have been allowed to get away as most of them did.

CHAPTER XXXII

The Adriatic—Italian Forces—Austrian Raids—"Amalfi" and "Garibaldi" Sunk—Deadlock at Sea—"Benedetto Brin" Destroyed—Serbian Army Rescued—Otranto Barrage—Doubtful Success—"Leonardo da Vinci" Blown Up—Allied Ships Too Slow—Monitors in the Upper Adriatic—"Wien" Sunk—Mutiny in Austrian Fleet—"Szent Istvan" Sunk—Durazzo Bombarded—"Viribus Unitis" Blown Up—Closing Operations in the Mediterranean—The Allies and the Greeks—Actions on the Palestine Coast—Sortie of the "Goeben" and "Breslau"—The "Raglan" Destroyed—"Breslau" Mined.

THE entry of Italy into the war on the side of the Allies on May 23, 1915, was of immense service to them on land. But at sea, owing to the peculiar geographical conditions of the Adriatic, it involved heavy additional responsibilities without any counterbalancing accession of strength. Austria at Pola, Sebenico and Cattaro had three excellent and strongly fortified deep water harbours. On the whole stretch of coast opposite, Italy had none of any value, for Venice is shallow and difficult of access, and Brindisi is excentrically placed. Moreover, the Adriatic is almost ideal for submarine war so that heavy ships venturing into it run enormous risk.

By agreement with the Allies,¹ the command in the Adriatic was to be held by the Italian Navy, which was to be reinforced by four British battleships and four light cruisers, and twelve French destroyers, with other minor torpedo craft and submarines. The main Italian force was concentrated at Taranto under the Duke Luigi of Savoy and consisted of the four Dreadnoughts (*Cavour*, *Dante*, *Giulio Cesare*, *Leonardo da Vinci*, all magnificent ships), four older battleships, and four armoured cruisers. At Brindisi was the 2nd Squadron under Vice-Admiral Presbitero of two old battleships, three

¹ The naval agreement is printed in full in Thomazi's *Adriatique*, p. 82 ff.

armoured cruisers and various other vessels, which was reinforced on May 31 by four British battleships of the *London* class and the four light cruisers. At Venice under Rear-Admiral Patris was a force of three older battleships, two armoured cruisers, eleven destroyers and thirteen submarines. The French Fleet at Malta with four Dreadnoughts and numerous other vessels was available as a reserve.

The Austrian Navy took the initiative when war began. Having a clear field and knowing exactly the position of the Italian ships, with points of refuge near at hand for its own ships on the Dalmatian coast, it could strike with effect. On the morning of May 24 Austrian ships simultaneously appeared off Porto Corsini, Rimini, Senegallia, Ancona and Barletta, and bombarded these places. At Porto Corsini the Italian defences had not been warned of war, and the destroyer SCHARFSCHÜTZE was allowed to enter the canal to Ravenna before the batteries opened on her. She was driven out, but not till she had done some mischief; the Austrian light-cruiser NOVARA and Torpedo Boat No. 80, which were supporting her, were considerably damaged.

At Rimini, the armoured cruiser ST. GEORGE with two destroyers shelled the town and caused the death of one civilian besides wounding several others. The Austrians claimed to be attacking the important bridge over the Marecchia. At Senegallia, the ZRINYI, battleship, bombarded the town and the railway but damaged only civilian property. Off Ancona, the Austrian Dreadnoughts appeared, fired on the town, damaged the cathedral and many houses, and torpedoed a German steamer in the harbour. Barletta was shelled by the light cruiser HELGOLAND and four destroyers, while the SPAUN shelled the coast railway at Termoli. The old Italian destroyer *Turbine* (325 tons), which was caught and chased by the Austrians while on patrol duty, was sunk with a loss of over twenty men. As some offset to this the shipbuilding yard at Monfalcone was bombarded and the Austrian frontier post at Porto Buso cleared by the Italian torpedo craft. These torpedo craft supported the army operations on the Isonzo and were covered by the old battleship *Sardegna* and armoured cruiser *Carlo Alberto*.

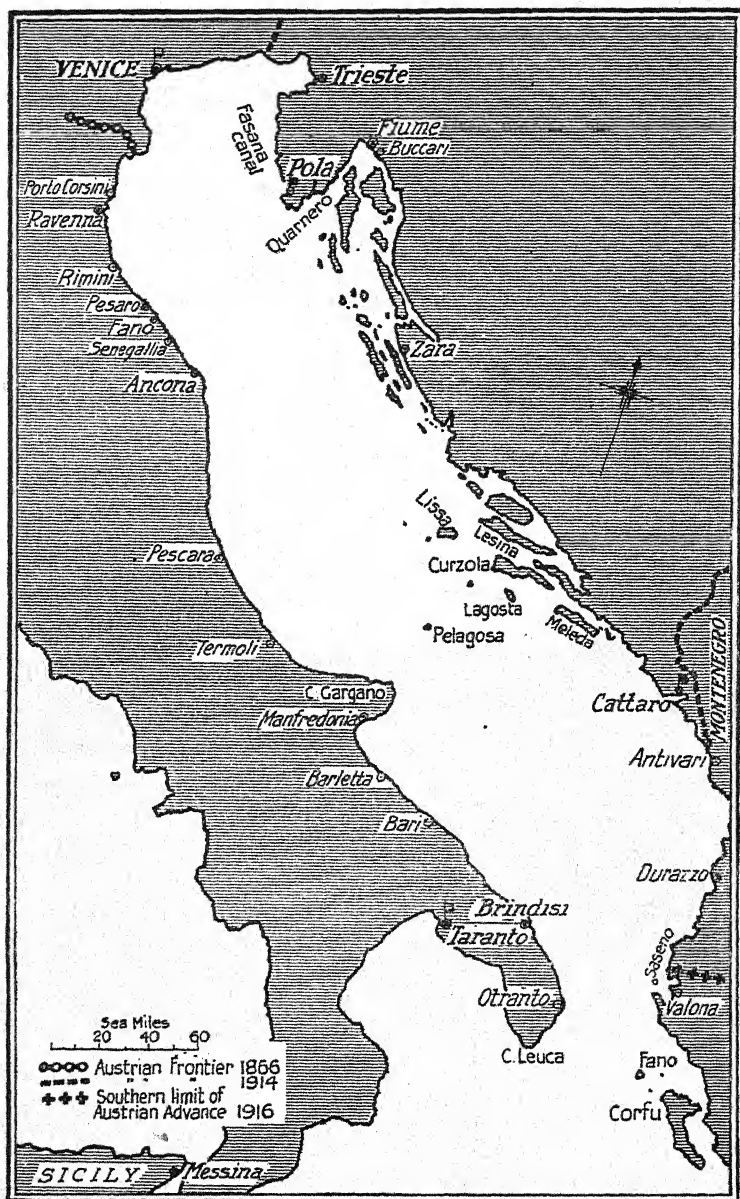
At the end of May, seven Italian armoured cruisers with light cruisers and destroyers swept the Adriatic and destroyed Austrian signal stations on the islands. They had several narrow escapes from Austrian submarine attack. On June 9 the British light cruiser *Dublin*, while escorting a supply

convoy for the Montenegrins, was torpedoed by the Austrian boat U 4, with a loss of 13 killed. She was able to get to Brindisi under her own steam but was long laid up for repairs. At the moment of attack she was screened by six destroyers. On June 12 the Italian submarine *Medusa* was torpedoed and sunk by the Austrian U 11 off Venice and only five of her crew were saved. A small torpedo boat was also sunk by the same submarine; and on June 18 an Austrian light cruiser and eight destroyers again bombarded points on the Italian coast near Rimini.

Probably it was because of this attack that four Italian armoured cruisers of the *Pisa* class were sent to the Upper Adriatic and stationed at Venice in waters which were ideal for submarine action. On July 7 the *Amalfi*, one of these cruisers, was torpedoed by the German boat U 26, and sank in six minutes with the loss of sixty-six men, off Venice. She was on her way to support a flotilla of torpedo craft reconnoitring the Gulf of Trieste. Her three sister ships were kept in harbour after this severe blow and numerous mines were laid by the Italians, one of which sank the Austrian U 12 while attempting to enter Venice harbour on August 8. About the same time the Italian submarine *Ialea* struck a mine and sank with the loss of all her crew save one man.

In the southern Adriatic, the Italians seized the strategically important island of Pelagosa on July 11. On the 18th while an Italian squadron was shelling the Austrian railway near Ragusa, the Italian flagship, *Garibaldi*, was twice torpedoed by the Austrian U 4 and sank in four minutes with the loss of fifty-three lives. U 4 must have been hit by the Italian fire and was never seen again. This affair and that of the loss of the *Amalfi* showed that coastal operations could not be safely undertaken by old-type surface ships in a zone where submarines were active. An Austrian attempt to recover Pelagosa on July 28 failed; it was followed, however, by the torpedoing of the Italian submarine *Nereide*, sunk off that island by the Austrian U 5.

On August 11 Austrian destroyers again attacked the Italian coast, and on the 17th with aircraft they carried out a bombardment of Pelagosa. The Italian loss was eighteen, and after this affair the island was evacuated; its rocky character rendered it difficult of defence without careful fortification and guns which the Italians could not spare. On August 13 the French destroyer *Bisson* sank the Austrian

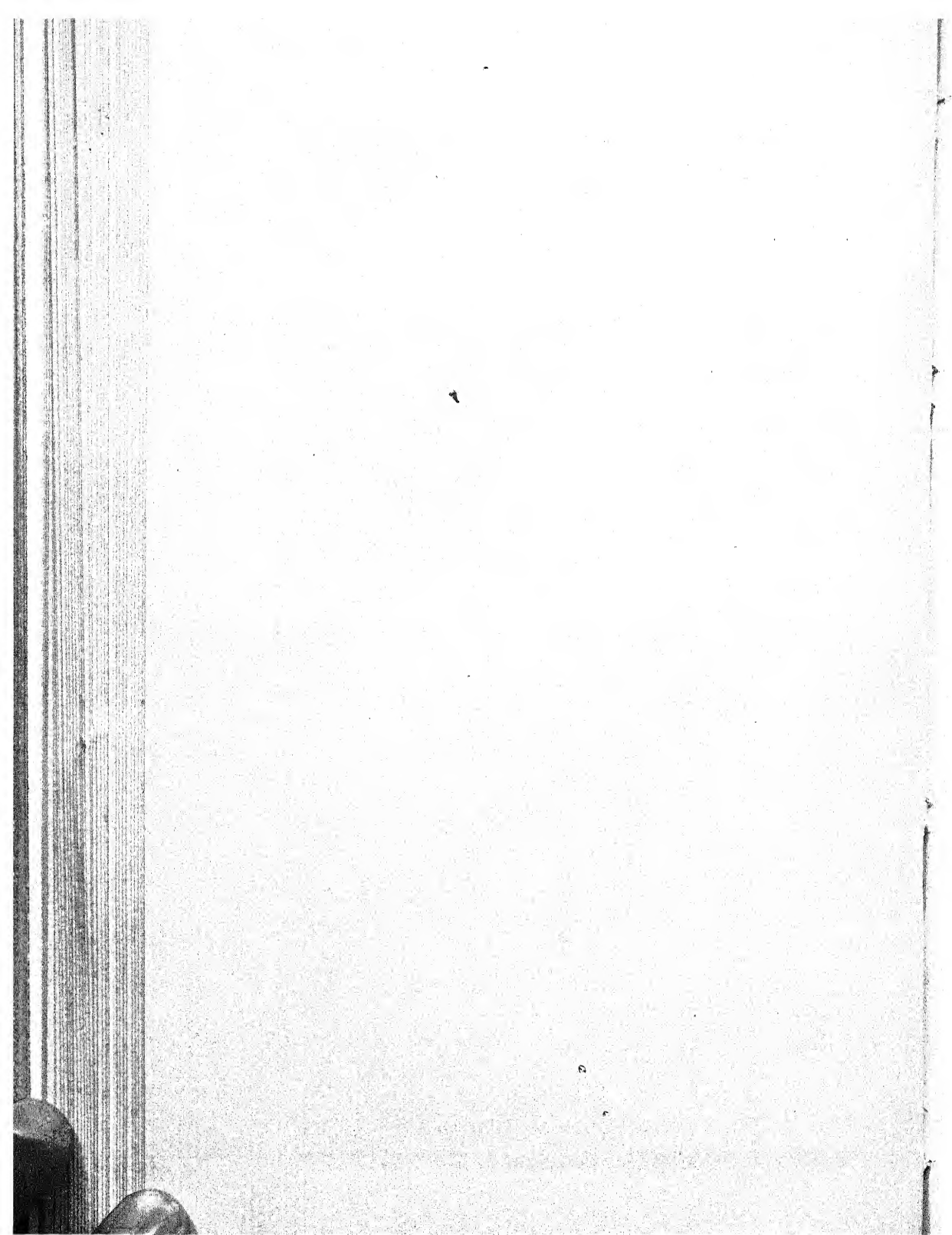


PLAN 43

[p. 294

THE ADRIATIC

The Austrian advance during the Great War was pushed south, nearly as far as Valona. The seizure of Curzola by the Allies was discussed, but ultimately rejected.



submarine U 3, saving twelve of her crew. After the loss of the *Garibaldi* and the skirmishing about Pelagosa, the tendency on either side was to keep surface ships other than torpedo craft in port, except when some special emergency arose.

The Adriatic became a sea which neither side commanded, and across which the destroyers and submarines of either carried out raids.¹ Gradually the utility of these raids came to be questioned and there were periods of almost complete inaction, except for the submarine warfare against commerce which went on continuously. The Italian losses were heavier than the Austrian because at the outset the Italian Navy made more use of its large surface ships at sea, and also possibly because of the enormous superiority of Austria in aircraft. This superiority was only gradually wrested from her. On September 22 an Austrian seaplane bombed and sank the French submarine *Foucault*, most of whose crew were saved.

On September 27 the Italian battleship *Benedetto Brin* was destroyed at Brindisi by a fire and internal explosion, with a loss of 421 officers and men, among whom was Rear-Admiral Rubin de Cervin. At a later date proof was obtained that her destruction was due to treachery; men in Austrian pay had placed an infernal machine in one of her magazines. The loss was a serious one. On December 4 the modern Italian destroyer *Intrepido* struck a mine off Valona and sank. On December 7, the French submarine *Fresnel*, which had grounded on the Albanian coast, was caught by the Austrians and destroyed and the crew made prisoners. When the Serbian troops in their disastrous retreat approached the coast, great efforts were made by the Austrians to prevent aid from reaching them by sea and there was a renewal of naval activity.

On December 28, Austrian light craft rammed and sank the French submarine *Monge* off Durazzo; the *Monge's* commander refused to surrender and went down with his boat though all the rest of the crew were taken prisoners. On the following day there was a sharp encounter between the Austrian and Allied light craft off Durazzo; the large Austrian destroyers TRIGLAV and LIKA were sunk, the LIKA on a mine. The HELGOLAND and two other Austrian destroyers had a narrow escape as they were chased by the British light cruisers *Dartmouth* and *Weymouth* and the

¹ Daveluy, *Action Maritime*, ii. pp. 17-19.

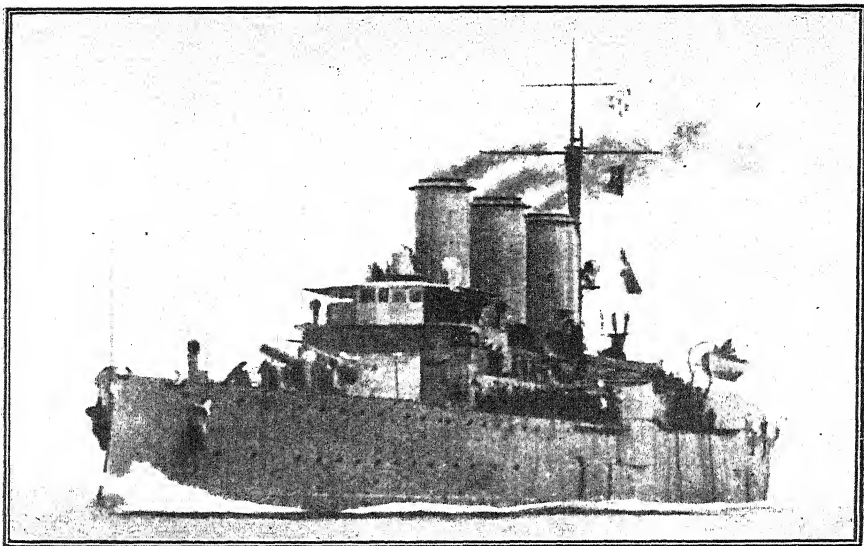
Italian *Nino Bixio* and *Quarto*, a force much superior in battery but inferior in speed.

Notwithstanding the Austrian Navy's efforts, the Serbian Army was safely transported from the Albanian coast to Brindisi and Corfu, whence it was subsequently transferred to Salonica. The work of moving it began on January 6, 1916, and was completed in March, though not without some loss of small craft by the Allies. About this period Bulgarian and Austrian troops threatened Valona, which the Italians had occupied in 1914, and four battleships of the *Roma* class with two armoured cruisers of *Varese* class were sent there to act as floating batteries. On March 18, the French destroyer *Renaudin* was sunk off the Albanian coast by an Austrian submarine with a loss of 47 killed.

With the development of German submarine warfare in the Mediterranean, the British Admiralty decided to try to close the Adriatic by a barrage of nets and drifters, similar to that in the Straits of Dover and to protect it by cruisers, destroyers and various other torpedo craft. The width of the straits is over forty miles; the depth of water is great, exceeding 3,000 feet in the centre, and in winter storms are common and violent. In September, 1915 sixty British drifters arrived at Taranto and began to lay nets in the Straits of Otranto and there on October 12, one of their number, the *Restore*, was sunk by U 39. The Adriatic nets, however, were for the most part not fitted with mines so that they were not much feared by the German submarines.

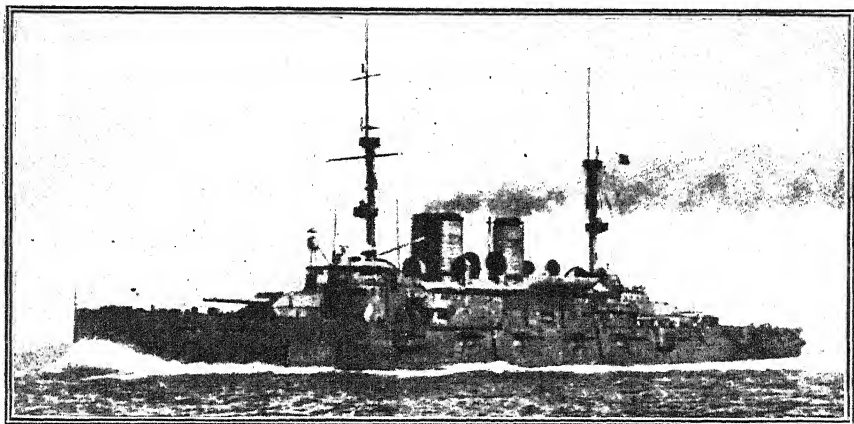
During the Serbian retreat the drifters were wanted to help in embarking men and patrolling the channel close under the Albanian coast, by which the Serbians were being transported to Corfu. Their activity was extraordinary and their services magnificent. In 1916 the total of drifters was raised to 160, but they were not able to prevent the German submarine mine layers from causing the Allies heavy loss. The depth of the nets was increased, however, and the drifters were armed with a small gun each. On March 12, 1916, the German submarine mine layer, UC 12, struck a mine off Taranto and sank, to be salvaged later by the Italians; and on May 13 the Austrian U 6 was caught in the nets and destroyed, her crew of 18 officers and men being saved.¹ U 34, a large German boat, about this date was also caught but succeeded in getting clear. The total of submarines destroyed from first to last in the barrage was only three,

¹ E. K. Chatterton, *The Auxiliary Patrol*, p. 123 ff. Manfroni, p. 158 ff.



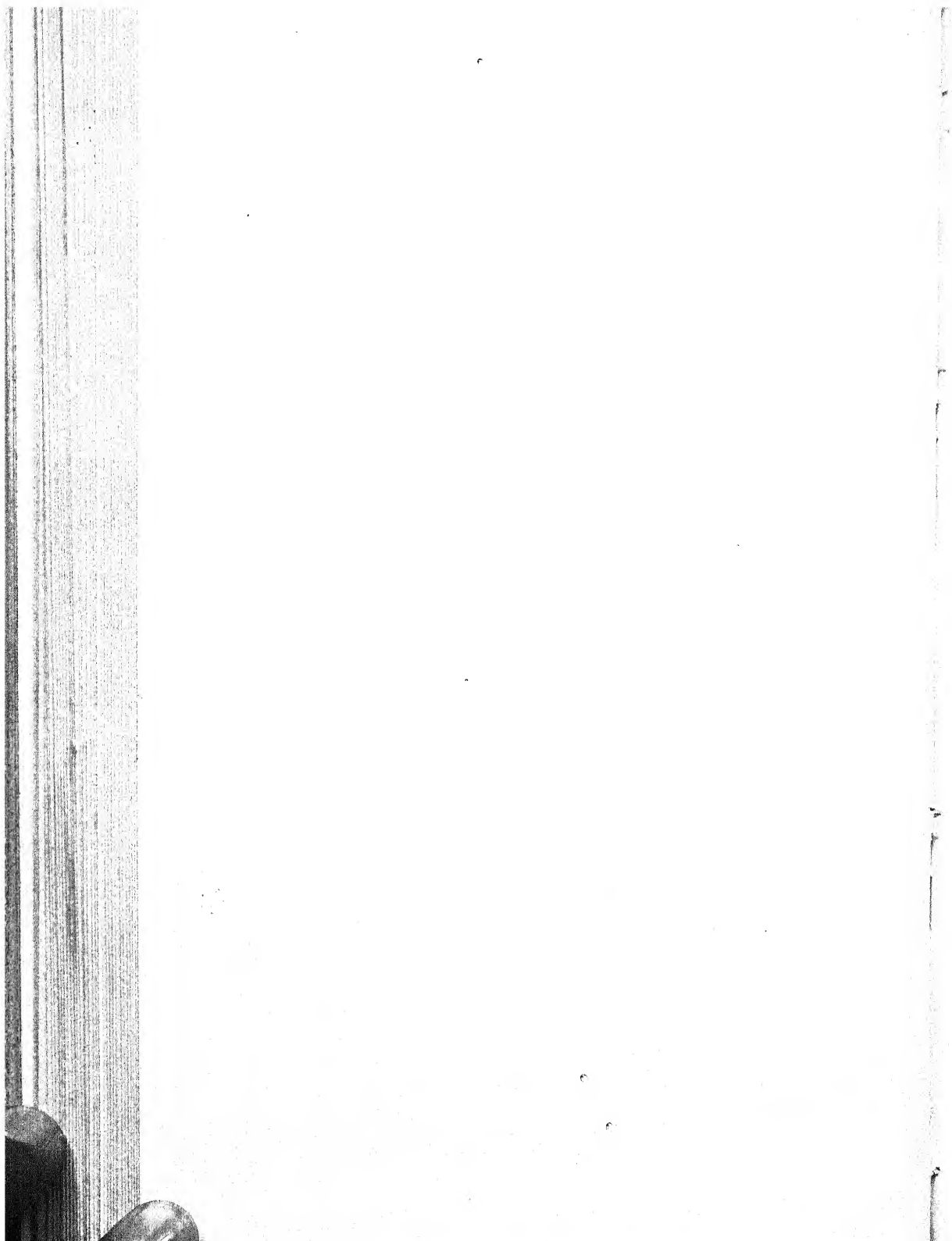
THE ITALIAN ARMoured CRUISER "AMALFI"

This fine vessel of the pre-Dreadnought era took part in the Italian war with Turkey; and was sunk by U26 in 1915, with the loss of 66 men when cruising off Venice. [See p. 294]



THE "BENEDETTO BRIN," SUNK BY INTERNAL EXPLOSION

This pre-Dreadnought battleship blew up at Brindisi, as the result of a fire in her magazines caused by treachery. The loss of life was heavy—421 killed. [See p. 295]



and the effect of the barrage was not so great as had been hoped.¹

Frequent attacks were made on the drifters. On June 1 four Austrian torpedo boats dashed out and sank a drifter; on July 9 the light Austrian cruiser *NOVARA* sank two drifters and inflicted a loss of 80 killed and 8 wounded in these small British craft, which, as invariably, offered a most gallant resistance to far superior force. The result of these two attacks was that the line of nets and drifters was moved further south, where it could be better protected. A mistake was made by the Allies in stationing the covering force at Brindisi on the Italian side of the Adriatic, instead of at Valona, on the Austrian side, where it could have come much quicker into action. Anxiety caused by the insecurity of Valona against land attack may have been the reason for the choice of Brindisi.

Two disasters befell the Italian Navy in 1916. The Dreadnought battleship *Leonardo da Vinci* in the night of August 2, while lying at anchor at Taranto took fire and, after a series of explosions, was scuttled with the loss of 203 officers and men killed and 80 injured. She was raised after the war, and a thorough investigation at the date of her loss proved that her destruction was due to treachery. In the night of December 11-12, 1916, the old battleship *Regina Margherita* in a storm struck the defensive mines outside Taranto and sank with the loss of 675 out of the 945 officers and men on board. On the night of December 22-23, three powerful Austrian destroyers from Cattaro made a sudden attack on the drifters of the barrage. Six French destroyers came up and drove them off before they had done much harm, but the Austrians escaped.

The year 1916 witnessed a great development of the Italian air service in the Adriatic; it now obtained the air superiority against the Austrians, and a simultaneous development of fast motor boats, lightly armed and sometimes carrying torpedoes, enabled the Italian Navy to threaten Pola and Trieste. These little craft were employed with admirable daring and initiative. In the night of November 1-2, Italian torpedo craft penetrated into the Fasana Channel, off Pola, where the heavy Austrian ships usually lay, and though their torpedoes were stopped by the nets protecting the Austrian battleships, this bold raid caused great uneasiness.

¹ According to Michelsen (p. 86) the barrage in the whole course of the war only accounted for one German submarine. But he does not reckon Austrian boats sunk.

One incident of the air war was of considerable naval importance. On September 24 the French submarine *Foucault* was sunk by aircraft attack, bombs dropped having caused her to leak. Her crew escaped.

With the rapid development of the German submarine war in early 1917 the Austrian naval authorities determined to attack the Otranto barrage. On May 14 Captain Horthy with the three 26-knot light cruisers *NOVARA*, *SAIDA* and *HELGOLAND*, two destroyers and a number of smaller craft left Cattaro, where the old armoured ships *St. George* and *BUDAPEST* were held in readiness to give him support. His destroyers encountered near Valona an Italian convoy on the way from Brindisi to Valona escorted by the old destroyer *Borea*, which was hit in the boilers at the very outset. The Austrian sank her and one of the steamers in the convoy. Alarm signals brought up the available Allied light craft, but meantime Horthy with his three cruisers slipped past southwards unobserved into the Straits of Otranto, and there fell upon the drifters which could offer little resistance to his powerful vessels, though several of them showed fight with their little guns. Fourteen drifters were sunk, 5 British fishermen were killed and 72 British prisoners were taken by the Austrians.

On Horthy's return he was chased and attacked by Allied forces, including the British light cruisers *Dartmouth* and *Bristol*, but escaped, and there were more Allied mishaps. The French destroyer *Boutefeu* coming out of Brindisi with the *Bristol* struck a mine and sank, and the *Dartmouth* was torpedoed by UC 25¹ with a loss of 8 killed and 7 wounded, though she got back safely to port. She inflicted on the *NOVARA* a loss of 12 killed and 25 wounded (among them Horthy). Most disappointing on this occasion was the inability of the *Bristol* to make anything like her nominal speed; this was the second occasion on which she had thus failed, the first having been when she pursued the *KARLSRUHE* in August, 1914. She did not exceed 23 knots, while the *Dartmouth* did 25 and the *NOVARA* 27.² The support given to the drifters was quite inadequate, and efforts were made after this affair to send them better and quicker aid, but the real trouble was that Italy had so few fast and powerful destroyers to face the Austrian vessels of the *TATRA* class.³ To increase the speed of the British and

¹ Captain Stankovic gives the submarine the number U 89.

² Thomazi, p. 150.

³ 800 tons, 32 knots, two 4-inch guns.

Italian light cruisers and fast craft, it was decided to dock them more frequently and to reduce their displacement by removing unnecessary weight from them. Thus they were at last able to overtake the Austrian fast vessels. On May 24 the small German mine layer submarine UC 24 was torpedoed and sunk by the French submarine *Circe*, off Cattaro. In July the drifter patrol was resumed but was moved yet further to the south where it could be better protected.

In May, 1917, two British monitors, the *Earl of Peterborough* and *General Picton*, each mounting two 12-inch guns, were sent to the upper Adriatic, for the support of the Italian right in its operations on the Carso. With them were the Italian floating batteries *Faa di Bruno* and *Cappelini* (each two 15-inch mounted in large lighters with engines and propellers just capable of moving them) and the smaller floating batteries *Monfalcone*, *Carso*, *Cucco* and *Vodice* (each one 12-inch gun). The Austrian works on the sea front of the Hermada lines were shelled by these vessels at intervals from August 18 to 24. On October 8 the small Austrian torpedo boat No. 11 was handed over to the Italians by her crew.

In the retreat of the Italian army which followed the reverse of Caporetto the British monitors and Italian floating batteries covered the Italian flank. On November 16 their activity drew out the Austrian coast defence ships WIEN and BUDAPEST with two light cruisers and ten destroyers, supported by numerous aircraft. They were driven off by the coast artillery and by the Italian motor-boats which most boldly attacked them with torpedoes. The WIEN received seven hits and the BUDAPEST one from the Italian guns. On November 29 the *Picton* with five shots at extreme range destroyed three bridges on the Lower Piave. On December 9 the two coastal motor boats, *M.A.S.*¹ 9 and 13, commanded by Lieutenant Rizzo, made their way into the anchorage near Trieste where the WIEN was lying, cut through the cables which obstructed the entrance to the anchorage, and at 1.50 a.m. of December 10 fired four torpedoes at the WIEN and BUDAPEST, hitting the WIEN amidships so that she sank rapidly with a loss of 46 killed and 17 wounded. The BUDAPEST was untouched.

Both the motor boats escaped undamaged after their splendid and daring feat; they were tiny vessels of 18 tons with a speed of 35 knots and an armament of two 18-inch

¹ M.A.S. stands for Motobarche Ansaldo.

torpedo tubes. The loss of the WIEN was a severe blow though she was of an antiquated type. But on December 19 the BUDAPEST came out from Trieste with the small battleship ARPAD and numerous small craft, to attack the Italian right. They seem to have retired because of a report that the Italian motor boats were preparing a fresh onslaught on them. These small craft were already beginning to exert a great moral effect on the Austrian command.

In September, 1917, a naval conference of all the Allied Powers met at London and considered the best measures of action in the Adriatic. The British Admiralty urged the necessity of providing a regular patrol by at least six powerful destroyers nightly for the protection of the drifters in the barrage. The difficulty still was that sufficient destroyers were not available, though the British agreed to provide three of the six (which involved the presence of a much larger force of British destroyers). Offensive operations against the Dalmatian coast were examined and the seizure of the island of Curzola was suggested. Italy, however, was too short of tonnage for such an enterprise, and the experience obtained when earlier in the war Pelagosa was seized, was not favourable. In November a series of violent storms almost entirely destroyed the barrage,¹ and the Allies decided that it was of a type unsuited to Adriatic winter conditions.

On February 1 a mutiny broke out in certain vessels of the Austrian Fleet at Cattaro. The red flag was hoisted but the troops remained steadfast, and a battery fired on the ERZHERZOG RUDOLPH when her crew attempted to change her anchorage, killing the ringleader on board, a quartermaster. By the night of the 3rd the mutiny was crushed; three of the ringleaders escaped in a seaplane to Italy; and 300 of them were imprisoned and tried by court martial, but apparently no great severity was shown. The whole Austrian Navy was in a disaffected state.

The chief events of the year 1918 apart from this and the incessant skirmishing between the destroyer and motor boat forces on either side and the submarines, were the bold attacks by Italian motor boats on Austrian ships in which surprisingly great results were obtained. These motor boats were almost invisible and, when they were fitted with electric engines, inaudible. They could only be employed on sheltered waters in calm weather but in such conditions they showed themselves extraordinarily formidable when

¹ Thomazi, p. 164. See Plan XXVIII, p. 86.

skilfully and boldly handled. Three of these boats, with electric motors, in the night of February 8-9, 1918, stole into the port of Buccari and there fired six torpedoes at Austrian vessels, escaping untouched. Only one torpedo, however, exploded and that appears to have done no great damage. But the exploit was admirably calculated to alarm the Austrians.

For their next enterprise the Italians constructed four strange little craft which might be described as sea tanks. They were fitted with appliances for climbing over obstructions such as hawsers or booms, and had dropping gear for torpedoes. One of these craft, the *Grillo*, in charge of Commander Pellegrini with three volunteers, entered the harbour of Pola in the night of May 13-14 but was there stopped by the obstructions and discovered. A violent fire was opened on her and as escape was impossible she was sunk by her crew, who surrendered.

In the night of April 22-23, five Austrian destroyers from Cattaro attempted a stroke against the drifters, but were themselves attacked by six powerful Allied destroyers (five British and one French) and driven off with some slight loss in the British boats. In May at length steps were taken to strengthen the Adriatic barrage. Forty British destroyers (including six Australian vessels of that type), twelve French destroyers, and all the available Italian destroyers were so organised as to provide a patrol of from six to ten units by night and day well in advance of the barrage. Thirty-five trawlers with hydrophones, or listening apparatus for the detection of submarines, were stationed north of the barrage, and south of it four trawlers with hydrophones. Still further to the south were twelve to sixteen United States motor submarine chasers, always on watch. Off Otranto was a system of mines 60 feet below the surface, and therefore dangerous only to submarines when forced below. Mobile nets fitted with mines ran from east of Otranto to the island of Fano, and from that point to Corfu the nets were fixed. The task of the German U boats became more difficult and the attacks on them multiplied. In April, five were attacked, in May, eight, and one of them, UB 52, was sunk by the British submarine *H 4*.

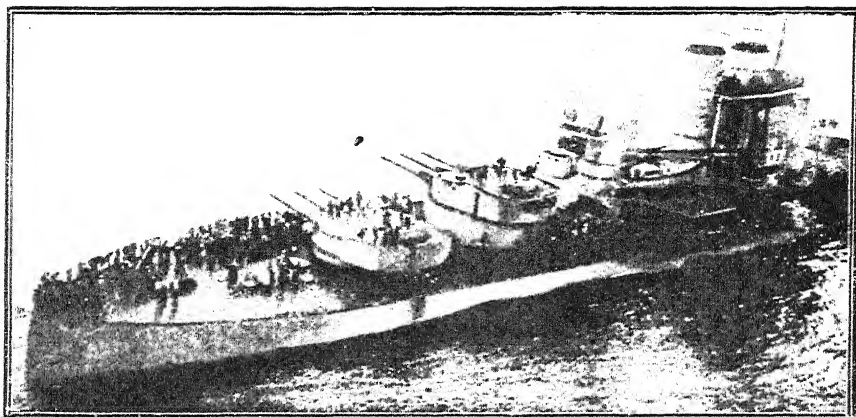
The German Admiralty urged the Austrian command to attack the barrage in force and thus support the submarines. In June, 1918, Admiral Horthy, who was now the Austrian commander-in-chief, decided upon a large scale operation

for that purpose. The four light cruisers of NOVARA type and the eight best destroyers of TATRA class concentrated at Cattaro. Twelve Austrian submarines were disposed at favourable points in the Adriatic to assail any Allied big ships which put to sea. The three small battleships of ERZHERZOG type were stationed on a line north to south about the level of Durazzo. Finally the four Dreadnoughts, in two detachments of two each, moved from Pola to Cattaro, on a leisurely cruise, escorted by torpedo craft and aircraft. The first two left Pola on June 8, the second two, SZENT ISTVAN and TEGETTHOFF, on June 9, with six small destroyers as their screen.¹

That evening it happened that Commander Rizzo (promoted for his gallantry in sinking the WIEN) was patrolling the upper Adriatic with two 20-knot coastal motor boats, *M.A.S.* 15 and 21. He saw nothing till at 3.15 a.m. of the 10th, when off Premuda, columns of smoke were made out to the north in the brilliant moonlit night. Rizzo soon discovered that they came from two large battleships. Reducing speed so that his engines ran almost noiselessly and his boats sent up no cloud of white spray, he approached the Austrians from ahead, and then stole between two of the destroyers which flanked the SZENT ISTVAN on the port side, unobserved. He increased speed when within the screen, and closed the battleship to within 300 yards, before firing two torpedoes which struck her amidships at 3.25. The torpedoes fired by the other motor boat ran badly and missed the TEGETTHOFF. After this wonderful exploit both motor boats escaped. Rizzo stopped the destroyer VELEBIT which was pursuing him, by discharging depth charges at her.

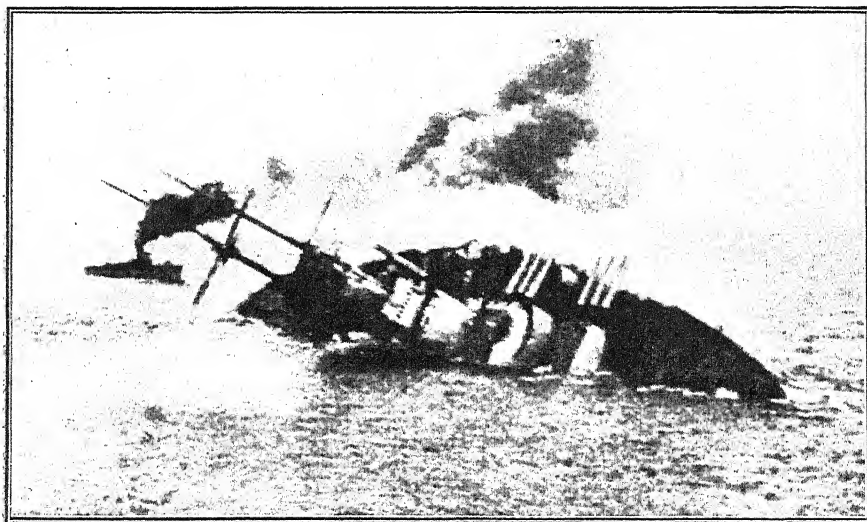
The SZENT ISTVAN kept afloat till 6 a.m. when she went down. Of her crew 89 were killed and 20 injured. She was the only Dreadnought battleship sunk in the war by torpedo, but the Austrian ships had not as thorough underwater defence as the German or British units. It was supposed at the Austrian headquarters that the plans had been betrayed, and the attack on the barrage was immediately abandoned. Thus this brilliant success, the greatest obtained by the Allies in the Adriatic and one of the most important in the whole war, had immediate strategical results. It was a revelation of a new danger to big ships from insignificant and inexpensive motor craft.

¹ Thomazi, p. 186 ff.



THE "SZENT ISTVAN" SINKING IN THE ADRIATIC

An Austrian Dreadnought battleship, she was torpedoed by a tiny motor boat and sank with a loss of 89 killed. The illustration shows the triple gun-turrets well. [See p. 302



THE "SZENT ISTVAN'S" LAST PLUNGE

She remained afloat for more than two and a half hours after she was torpedoed. Two torpedoes were used against her. A small vessel can be seen near, aiding in the rescue of the crew.

To support the land operations of the victorious Allied armies under Franchet d'Esperey in Macedonia, on October 2 Durazzo was bombarded by an Allied force consisting of three Italian armoured cruisers of the *Pisa* class and the British light cruisers *Lowestoft*, *Dartmouth* and *Weymouth* with light craft and aircraft and an Austrian torpedo craft was sunk in the port.¹ The *Weymouth* was torpedoed by U 31 but beyond having her rudder blown off received no very serious damage, and the value of the place as an Austrian naval base was hardly affected by the bombardment. But the rapid advance of the Allies on land compelled the retreat of the Austrians from Albania, and was followed by a general mutiny in the Austrian Fleet, which declared for the Jugo-Slavs. Before this declaration was known Lieutenant Paulucci, in a small vessel which ran awash carrying two mines with time fuses, penetrated into the harbour of Pola on November 1-2, and placed one of the mines in contact with the hull of the Dreadnought VIRIBUS UNITIS, where it exploded on November 2, and sank that ship. The Italians in charge of the attacking vessel were only two in number and were taken prisoners after they had destroyed their little craft. This was the last operation of the naval war in the Adriatic.

Naval operations in the Mediterranean, after the evacuation of Gallipoli, were concerned almost entirely with the protection of Allied shipping against the increasing energy of the German submarines. The Allied losses were heavy, as conditions were exceedingly favourable to submarine warfare. The British Navy lost the old battleship *Russell*, sunk on a mine off Malta which U 73, a large new boat had laid on April 27, 1916, and numerous smaller craft; France lost an old cruiser *Amiral Charner*, sunk by a U boat off the Syrian coast with all the 500 men on board, except one survivor, on February 8, 1916; and the *Châteaurenault*, sunk between Taranto and Corfu on December 14, 1917, by UC 38 which was destroyed. In the French cruiser ten men were killed. The old battleship *Gaulois* was torpedoed by a U boat on December 27, 1916, but remained afloat long enough to permit the escape of all her crew except four who were killed by the explosion. On March 19, 1917, the large French battleship *Danton*, en route from Toulon to Corfu, was hit by two torpedoes under the forecassle and on the forward engine room and sank with about 300 of her crew.

¹ Sims, pp. 202-3. Manfroni, p. 322.

To support the land operations of the victorious Allied armies under Franchet d'Esperey in Macedonia, on October 2 Durazzo was bombarded by an Allied force consisting of three Italian armoured cruisers of the *Pisa* class and the British light cruisers *Lowestoft*, *Dartmouth* and *Weymouth* with light craft and aircraft and an Austrian torpedo craft was sunk in the port.¹ The *Weymouth* was torpedoed by U 31 but beyond having her rudder blown off received no very serious damage, and the value of the place as an Austrian naval base was hardly affected by the bombardment. But the rapid advance of the Allies on land compelled the retreat of the Austrians from Albania, and was followed by a general mutiny in the Austrian Fleet, which declared for the Jugoslavs. Before this declaration was known Lieutenant Paulucci, in a small vessel which ran awash carrying two mines with time fuses, penetrated into the harbour of Pola on November 1-2, and placed one of the mines in contact with the hull of the Dreadnought VIRIBUS UNITIS, where it exploded on November 2, and sank that ship. The Italians in charge of the attacking vessel were only two in number and were taken prisoners after they had destroyed their little craft. This was the last operation of the naval war in the Adriatic.

Naval operations in the Mediterranean, after the evacuation of Gallipoli, were concerned almost entirely with the protection of Allied shipping against the increasing energy of the German submarines. The Allied losses were heavy, as conditions were exceedingly favourable to submarine warfare. The British Navy lost the old battleship *Russell*, sunk on a mine off Malta which U 73, a large new boat had laid on April 27, 1916, and numerous smaller craft; France lost an old cruiser *Amiral Charner*, sunk by a U boat off the Syrian coast with all the 500 men on board, except one survivor, on February 8, 1916; and the *Châteaurenault*, sunk between Taranto and Corfu on December 14, 1917, by UC 38 which was destroyed. In the French cruiser ten men were killed. The old battleship *Gaulois* was torpedoed by a U boat on December 27, 1916, but remained afloat long enough to permit the escape of all her crew except four who were killed by the explosion. On March 19, 1917, the large French battleship *Danton*, en route from Toulon to Corfu, was hit by two torpedoes under the forecandle and on the forward engine room and sank with about 300 of her crew.

¹ Sims, pp. 202-3. Manfroni, p. 322.

The forces available for the protection of commerce in the Mediterranean were weak in view of the great extent of water to be watched and the skill of the German submarine officers operating there. The risk had always to be faced of a possible movement by the GOEBEN and BRESLAU from the Dardanelles, in combination with a movement by the four Austrian Dreadnoughts, but, fortunately for the Allies, the strategy of the German Powers was unenterprising. The fact that no fewer than three Navies were concerned in the Allied naval operations gave the German Staff great opportunities which it failed to seize. The Japanese cruiser *Akashi* with three divisions of destroyers arrived in April, 1917. Late in 1917 United States vessels began to arrive and a squadron of thirty-six motor craft for chasing submarines under Captain C. P. Nelson was, in 1918, based on Corfu, where it made matters lively for the German and Austrian submarines.

Three events of major importance, apart from the constant fighting of small craft with hostile submarines, took place in the Mediterranean after the close of the Dardanelles campaign. The first was the Allied naval demonstration at Athens, the object of which was to secure compliance with an ultimatum addressed to King Constantine, calling on him to surrender his field artillery. A powerful Allied squadron under the French naval commander-in-chief, Admiral D. du Fournet, on December 1, 1916, landed 2,500 men.¹ They occupied various important points in Athens but were attacked by Greeks and, after some skirmishing, the order was given for the battleship *Mirabeau* to open fire.

A few shells were directed on the outskirts of the city and on the Palace, when Admiral du Fournet agreed to stop hostilities and accept the King's offer to hand over six batteries of mountain guns. In this affair the Allies lost 60 killed and 167 wounded and the Greeks 30 killed and 55 wounded. Du Fournet was bitterly criticised for not having bombarded Athens when the firing began. He appears to have shown judgment and humanity. Had he laid the Greek capital in ruins such action would have been very difficult to justify. The Greek Government in this unhappy business was not quite fairly treated by the Allies.

The second event was the fighting on the Palestine and Egyptian coast in 1916 and 1917. The small light draught monitors, firing from Tineh Bay, at the north end of the Suez canal, gave important aid in repulsing the second Turkish

¹ See Dartige du Fournet, p. 210 ff.

attempt to invade Egypt in August, 1916. When the British movement on Gaza began, two British monitors and the French coast defence ship *Requin* (two 10.8-inch guns) co-operated, and on April 19, 1917, bombarded the Turkish positions. A considerable squadron was assembled to cover Allenby's left when he opened his campaign for the capture of Jerusalem. It was under Rear-Admiral Jackson and consisted of the *Requin*, with three old French destroyers, the old cruiser *Grafton*, the monitors *M* 15 (one 9.2-inch) 29, 31 and 32 (each two 6-inch guns), the two light draught gunboats *Ladybird* and *Aphis* (each two 6-inch guns), and the modern destroyers *Staunch* and *Comet*.

These ships continuously bombarded the Turkish works before Gaza in the closing days of October, and early November, but themselves did not escape scot free. The *Requin* on November 1 had 9 killed and 29 wounded by a Turkish shell, and on November 11 the *Staunch* and *M* 15 were sunk by U boats with a British loss of 33 killed. During the campaign which broke the Turkish forces in Palestine, a small naval force co-operated, and maintained touch. When Allenby's cavalry entered Beirut, they were met there by the French Syrian squadron which established communications with the British Army on October 7.

The third event was the sortie of the GOEBEN and BRESLAU from the Dardanelles on January 20, 1918. The Allied arrangements for such a contingency provided for a concentration of the available British force (consisting of the pre-Dreadnoughts *Lord Nelson* and *Agamemnon* with six cruisers, twelve monitors and a number of old destroyers) at Mudros, while the French (seven Dreadnoughts) were to concentrate at Cephallonia and the Italian forces (five Dreadnoughts) at Brindisi, so as to prevent a junction between the German and Austrian ships. The two German vessels came out when it was still dark, at 5 a.m., and it so happened that on that day and at that time there was little or nothing near the Dardanelles to stop them. On watch were the British destroyers *Lizard* and *Tigress* which were quickly driven off by the powerful batteries of the German ships. The GOEBEN and BRESLAU steamed to Imbros and there surprised and destroyed the two British monitors, *Raglan* (6,150 tons, two 14-inch guns) and *M* 28 (one 9.2-inch gun) with a British loss of 133 killed and 27 wounded. The German ships then turned southward, but at 7 a.m. the BRESLAU ran into a British mine field south

of Imbros, and after a series of explosions suddenly sank. Of her crew 172 were rescued by the British.

The GOEBEN, a few minutes after this German disaster, turned back and, under continuous attack from British aircraft, struck a mine which caused her some damage. She regained the Dardanelles, however, and was met by four Turkish torpedo craft and by several German aircraft. She was beached off Nagara Point, and was there repeatedly attacked by British aircraft and submarines. In these attacks the *E 14* was sunk with the loss of all on board except seven officers and men. The GOEBEN was ultimately got afloat again and taken to Constantinople for repairs. But if her aim was to go west to join the Austrians, it was defeated; and in view of the Russian collapse there was no more work for her in the Black Sea.

Following the abdication of King Constantine, in July, 1917, Greece had entered the war on the side of the Allies, and the Greek Fleet was added to the Allied forces. The Greek destroyers had already been seized by du Fournet in November, 1917, because the Allies suspected King Constantine of complicity with the Germans, though this suspicion in the light of later knowledge seems quite unfounded.

In October, 1918, the British squadron at Mudros was reinforced by the *Superb* and *Temeraire*, and on October 31, the *Superb* hoisted the flag of Vice-Admiral Sir S. Gough-Calthorpe, with orders to proceed into the Black Sea. An Armistice with Turkey was signed, hostilities ceasing at noon that day. But not till November 12 were the Dardanelles clear for the passage of the fleet.

CHAPTER XXXIII

Effect of the Submarine War—German Mistakes—Value of Submarine Arm—Anti-Submarine Weapons—Air Attacks on U Boats—Importance of Sea Communications—Blockade of Germany—Changes in Method of Blockade—United States Protests—Convoy of Neutrals—Naval Forces Localised—Small Motor Craft—Wireless—All Importance of Gunnery—Calibres—Turrets—Ammunition Fires—Speed—Mines and Paravanes—Chance—Staff Work and Admiralty Reform—Effect of the Blockade—Armistice Terms—German Fleet Surrenders—Sinkings at Scapa—British Casualties.

By the middle of 1918 the British Navy had defeated the submarine; and although a considerable part of the British force was engaged in protecting the movement of American troops to Europe, the convoy system had proved a triumphant success. But the loss which the British nation had sustained and the enormous expenditure which it was forced to incur to save its Allies (in part through guaranteeing their purchases in the United States) must affect it for generations and are mainly responsible for the profound distress which its people suffered after the war had been won.

The rate of insurance, which in peace is normally 2s. 6d. or one-eighth per cent., rose to £7, and might have been much greater but for the intervention of the Government. The cost of Atlantic freights—which also were in large measure controlled by the Government in the case of British vessels—increased nearly forty times. The highest war rate for coal from Cardiff to Barcelona reached £22 per ton (normal about 15s.)¹ and from the rice ports to England £30, against a normal figure of about 25s.

That the submarine is not a satisfactory commerce destroyer seems proved by the war. The use of it by Germany

¹ *Brassey's Naval Annual*, 1921-2, p. 239.

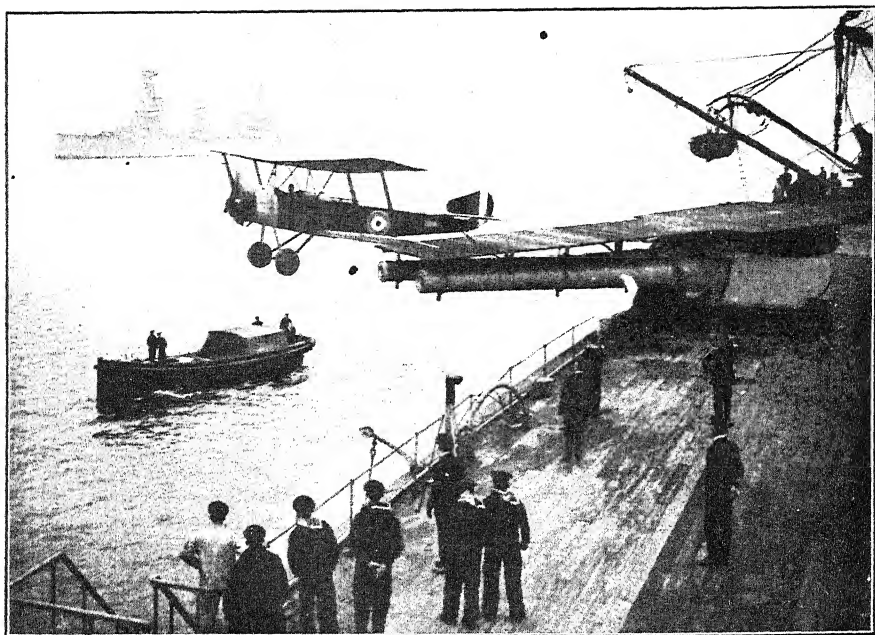
BATTLESHIPS IN ACTION

with a total disregard for the safety of passengers and crews in the vessels attacked gradually forced neutral Powers to range themselves against her. If the rules laid down by the Washington Conference of 1921-22 are observed, in the future submarines will only be able to carry on warfare against commerce under cruiser conditions—that is to say, attacks may not be made on merchant vessels without warning and vessels may not be destroyed unless their passengers and crews have been first placed in safety. These two restrictions, the Germans contended, during the war of 1914-18 would have rendered submarine operations against commerce impracticable. But that was not the experience of the small force of British submarines operating in the Baltic.

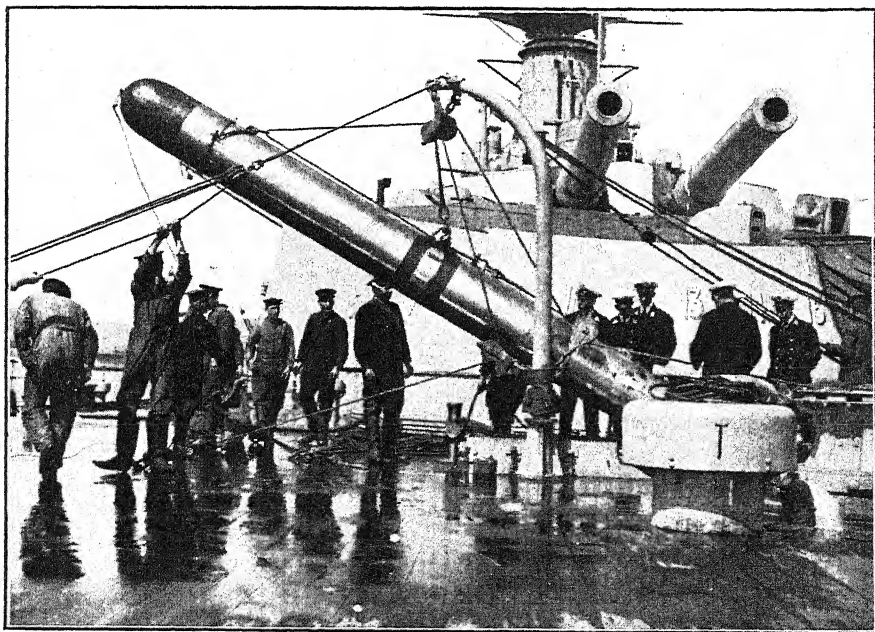
The U boat war would have had much more chance of success, if it had been supported by vigorous action on the part of the German surface craft and the High Sea Fleet, so as to occupy to the utmost the attention of the British and harry the trawlers and small craft which played so important a part on the Allied side.¹ The cruises of the *MOEW*E suggest that a larger use might have been made of surface cruisers by the Germans; a couple of battle cruisers, acting separately, would have been most dangerous and troublesome, and though it would have been difficult to keep them supplied with fuel, they could probably have replenished their bunkers from prizes and neutrals. It is practically certain that they would eventually have been lost, but before they were interned or sunk they could have done immense damage. The Austrians had no battle cruisers, and the exit from the Adriatic was too closely watched by powerful forces to permit of action by surface ships in the Mediterranean in support of the U boat. The *GOEBEN* until 1918 was wanted to watch the Russians in the Black Sea, and when she tried to leave the Dardanelles was, as has been seen, immediately damaged by a mine which compelled her return.

Against battleships and battle cruisers of modern type the submarine in the war proved totally ineffective, except in so far as she clogged their action by necessitating zig-zagging, screening with light craft and causing intense nerve strain among officers and men. Towards the close of the war, however, new torpedoes of extraordinary power were constructed by the Germans (though they were not used) with a

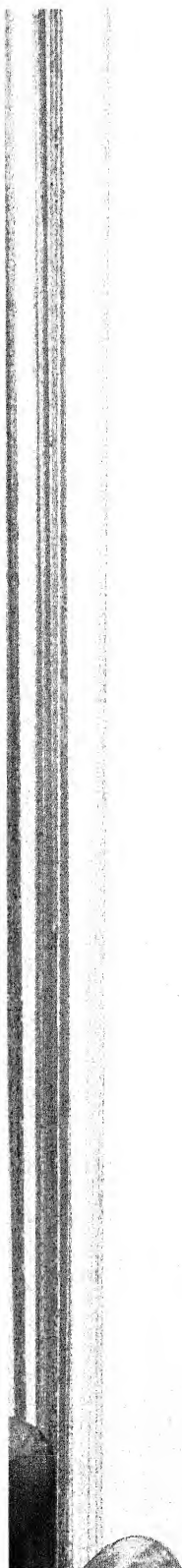
¹ The total strength of the British Auxiliary Patrol rose from 745 on Dec. 31, 1914, to 3,714 on Nov. 11, 1918. (*Naval Annual*, 1919, p. 224). In addition 1,500 small craft were furnished by other Allied Powers, making at the end of the War over 5,210 in Service.



Aeroplane just rising from the platform on the guns of one of the turrets in the British battle cruiser, *New Zealand*. This type of fitting was introduced after Jutland for machines which spotted. The battle cruiser in the distance on the left is probably the *Australia*.



Hoisting in a 21-inch torpedo on board the British battleship *Emperor of India*. One of the big turrets containing two 13.5-inch guns is well seen.



ANTI-SUBMARINE MEASURES

calibre of 24-inch, a speed of $25\frac{1}{2}$ knots at a range of 16,500 yards, and an explosive charge of 550 pounds, with thrice the power of gun cotton.¹ It remains an open question whether such capital ships as the *Queen Elizabeth* or BADEN would have survived a hit with such a torpedo amidships; the existence of torpedoes of this type is, as Commander Castex² has said, a brake which prevents the constructor from rushing to extremely large dimensions.

For an estimate of the efficacy of the various methods of defence against submarines and attack on them, it is necessary to go to German authorities, checking their statements by evidence forthcoming on the Allied side. The most important weapon after the mine was the depth charge, a bomb which was automatically detonated when it reached a certain depth. Owing to shortage of explosives the supply in the British Navy in 1916 was quite inadequate and even in early 1917 the allowance per ship or destroyer was only four, two each containing 300 pounds of trinitrotoluol and two each containing 120 pounds.³ The output per week was raised from 140 in July, 1917, to 800 in December, and the allowance for each destroyer was increased by the end of 1917 to twenty or thirty. The larger size of depth charge had to be exploded within 14 feet of a submarine to destroy her; at 28 feet it might damage her enough to force her to the surface.⁴ In 1917 a type of weapon for projecting depth charges to a distance of 50 yards was devised and rapidly supplied.

Special howitzers for throwing large projectiles with a heavy charge of explosive to a much greater distance were also constructed—one of the best an 11-inch light howitzer, firing a 350 pound shell to a distance of 3,000 yards, which was powerful enough to put a submarine out of action if it made a hit. Depth charges were perhaps the chief weapon of the surface ship in the attack on the submarine, though they were often exploded with little or no result.

The hydrophone was a device first tried in 1915 for locating submarines by sound, but it was not available in a satisfactory form or in sufficient numbers till the end of 1917.⁵ In December a squadron of drifters with a P boat (a special type of patrol boat built in the war, of 613 tons, armed with

¹ Scheer, p. 341.

² Castex, p. 201.

³ Jellicoe, *Crisis*, p. 59.

⁴ The large German submarine cruisers were too strongly built to be put out of action by depth charges.

⁵ *Crisis*, p. 63.

BATTLESHIPS IN ACTION

one 4-inch and one pom-pom gun), equipped with hydrophone, followed a submerged submarine for seven hours, and believed they had destroyed her at the end of that period. Several depth charges were dropped near her but after all she managed to escape. An American hydrophone of simpler type, which, however, necessitated the stoppage of the vessel using it, proved exceedingly serviceable. The scale of the hydrophone service may be understood from the fact that at the close of the war 3,000 British officers and men were receiving instruction in it. Other secret devices for detecting the presence and position of submarines were also evolved and perfected, till by the end of 1918 some part of the protection given to these underwater craft by their invisibility had been taken from them.

Decoy ships, according to the German authorities, only accounted for twelve submarines; there were a few more cases which were doubtful, but the highest estimate is not much above fifteen. Towards the end of the war they had become ineffective, and according to Michelsen¹ the Germans suffered no loss from them after mid-1917.

Submarines were employed against submarines with a fair degree of success; the chase of an invisible vessel by a vessel which could not see clearly was a difficult undertaking and *a priori* did not seem very likely to be productive of great results. But the German authorities state that the attacks by Allied submarines produced on the U boat crews² a feeling of insecurity and that, when the small number of such Allied submarines engaged in this peculiar work is taken into account the submarine was perhaps the most effective of all weapons employed against the U boats. Michelsen goes so far as to lay down the principle that the submarine is not only the weaker Power's best weapon of attack but also the stronger Power's best means of defence.

Barrages of nets and mines, combined in some cases with booms of floating timber, and barrages composed purely of mines varied considerably in their effect on the U boats. The earlier barrages in the Straits of Dover were inefficient, only accounting for two boats. The formidable mine fields laid in December, 1917, were of a very different character and, according to the Germans, dealt a severe blow to the Zeebrugge submarines, which at a stroke were deprived of all their advantage of geographical position. The North

¹ Michelsen, p. 79.

² Michelsen, p. 82. Jellicoe, *Crisis*, p. 98.

BARRAGES AND AIRCRAFT

Sea barrage, as has been seen, was not effective owing to special difficulties. The Otranto barrage was equally futile, through the great depth of water, and only accounted for one German submarine,¹ though it may have helped to force others to the surface and thus have contributed to their destruction.

Aircraft in narrow waters made existence very disagreeable for the crews of hostile submarines, but the number of boats sunk by them was exceedingly small; the highest estimate is seven and the German figure is four. Few aeroplanes, till the close of the war, could carry bombs heavy enough to make much impression on a submarine when below the surface. More than one British submarine was heavily bombed by German aircraft but returned to port, though described as sunk. Among such was *C 25*,² which was still in service at the Armistice. The air attack on submarines, however, is obviously destined to become much more dangerous in the future with the enormous bombs now available.

One fact the U boat war brought into clear relief—the supreme importance of oversea supplies to all the combatants. France and Italy had to obtain food, coal, steel and explosives by sea, and if the U boat blockade had succeeded, their forces would have been deprived of essential munitions and their defeat have been rendered certain. Countries, which in ordinary conditions were almost self-dependent, when their male population was absorbed by the demands of the fighting line and the munition industries, had to import on a large scale. The maintenance of sea communications for the Allies by the British Navy and the British merchant service, which played by far the leading part, was therefore a contribution to the Allied cause of the utmost value. In the same way the denial of sea communications to Germany and her Allies by the blockade (though this was never complete) was one of the chief reasons for the German collapse. In November, 1918, the Allies could have continued the war indefinitely, whereas the Germans were in a hopeless economic position, despite all their skilful organisation and their vast conquests in Russia.

The blockade of Germany was hampered at the outset by the Declaration of London, (which the British Government had rashly adopted though the Declaration had never been

¹ Michelsen, p. 86.

² Neumann, *Luftstreitkräfte*, p. 559.

BATTLESHIPS IN ACTION

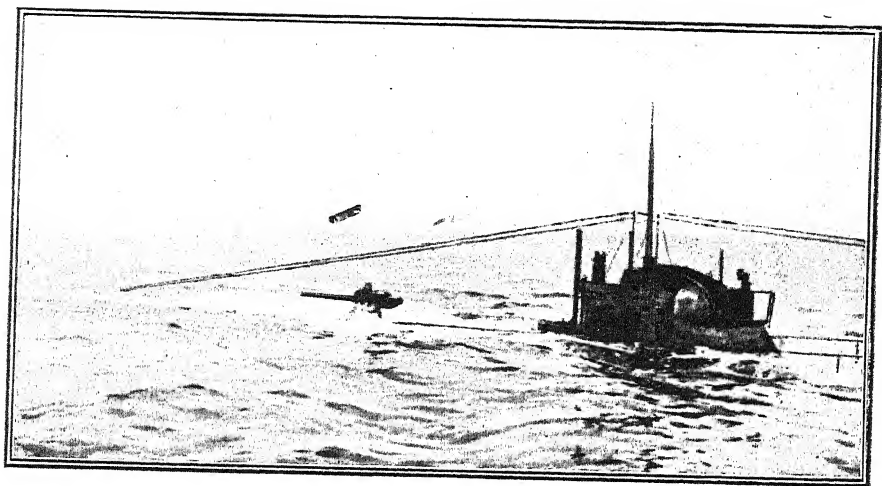
ratified), speedily proved disastrous to Allied interests, and had to be formally abandoned on July 7, 1916. The old form of blockade required the presence of blockading cruisers within sight of the blockaded port or ports, or close to them. This was admitted by the most powerful neutral, the United States, to be impracticable in the conditions existing in 1914, with mines and submarines. Yet at intervals the United States put forward demands for the so-called "freedom of the seas" or the right to navigate the seas in war as freely as in time of peace.¹ This was a claim which was best answered by citing the United States' action in the Civil War of 1861-5. If it had been admitted, navies would have been grievously handicapped to the advantage of land powers. At the same time the German form of blockade by wholesale scattering of mines outside territorial waters is an abuse which requires control and limitation.

In the Great War the Allies maintained no inshore squadrons, and for that reason it was alleged by the United States down to 1917 that the blockade was not an effective one. But in practice German and Austrian communications with the outside world (always excepting Scandinavia and Holland) were more thoroughly interrupted than sea communications had been in any earlier war. The Allies stopped goods which were known or suspected to be consigned through Dutch or Danish or Swedish ports and territory to Germany, thus extending the principle of ultimate destination. They forbade any vessel to sail to or from any German port. They required neutral ships en route for countries in easy land or sea communications with Germany to touch at a British port (Kirkwall in the north and the Downs in the south) for examination, in view of the impracticability of carrying out a thorough search at sea in waters where submarines were constantly present.

A further innovation in methods of blockade was the system of rationing neutrals and permitting them only to import the normal quantity of food or other necessities. This rationing was enforced by a "black list" of neutral firms which dealt with Germany² and by refusing coal at Allied coaling stations to neutral shipping which disobeyed the rationing order. At that date England had a monopoly in the supply of coal for bunker purposes, and oil fuel had not

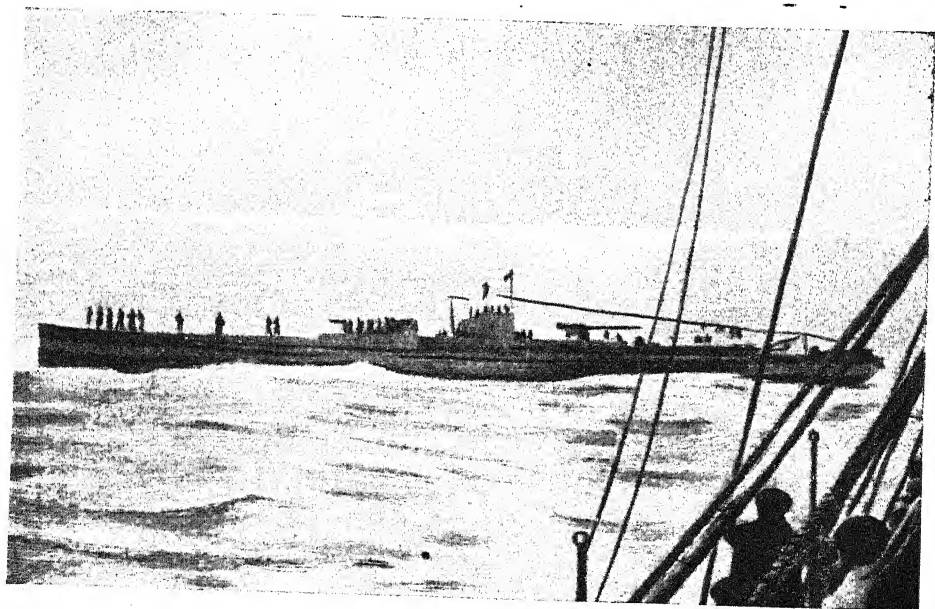
¹ Garner, a good United States jurist, criticises this claim sharply (ii, pp. 457-9).

² The United States had such a "black list" in the American Civil War. See i. p. 24.



A GERMAN SUBMARINE DIVING TO ATTACK AN ALLIED CONVOY

The smoke of ships is seen on the horizon. This shows the arrangement of the conning tower and the periscopes.



A GERMAN SUBMARINE HOLDING UP A SPANISH STEAMER AT SEA.

This illustrates the larger type of German submarine operating in 1916 and 1917. It was taken at sea from a neutral ship during the war.

THE BLOCKADE

been generally introduced. Yet even with the system of rationing large quantities of food were exported from neutral countries in physical contact with Germany.

To all these innovations the United States Government took strong exception, and there were moments when it seemed as though it might proceed to the extremity of war against the Allies. It thereby caused them at times agonising anxiety. It also objected to the discriminatory character of the blockade in that the German ports in the Baltic were not sealed and that traffic by sea could be freely conducted between Sweden and Germany, except when the British submarines were operating against commerce, which they did from time to time.

A completer and severer blockade than was imposed might possibly have been carried out with the means of economic pressure that England possessed, in her ability to cut off coal from Scandinavia. But not for two and a half years, or until the entry of the United States into the war, was this kind of pressure applied. Admiral Consett, in a famous work,¹ has argued that British trade "with Germany's neutral neighbours . . . undermined the power of the fleet, succoured our enemies, and nearly led to our defeat," and that if the economic leverage in England's hands had been exerted, the war could have been ended long before November, 1918.

Defenders of the British Government have contended that trade with Scandinavia was only permitted to obtain in exchange materials indispensable for munitions, such as Swedish iron ore, the need for which compelled the Allied to treat Sweden with special respect. But the facts certainly suggest that the British Government was unduly timid or even negligent in applying the blockade, and failed to recognise in time the formidable nature of the economic weapons it possessed. As a consequence, not until the United States entered the war did the blockade really become complete, and then through the American Government's prohibition of the export of any goods from its territories which might reach Germany. Licences were granted to neutrals for exports but only where there was security that the supplies exported would not find their way to Germany.

In 1918 a question of importance in connection with the right of search was raised by the Dutch Government, which announced its intention of sending a convoy under Dutch

¹ *Triumph of Unarmed Forces*. He was British Naval Attaché in Scandinavia in the War period.

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naval escort from Holland to the Dutch East Indies.¹ The British Government thereupon announced that it did not recognise the right of convoy (*i.e.* the exemption of convoyed vessels from search by belligerent vessels), and finally reached a friendly agreement with Holland, by which only Dutch officials and Dutch Government stores should be conveyed thus, and no civilian passengers, mails, private correspondence or parcels.²

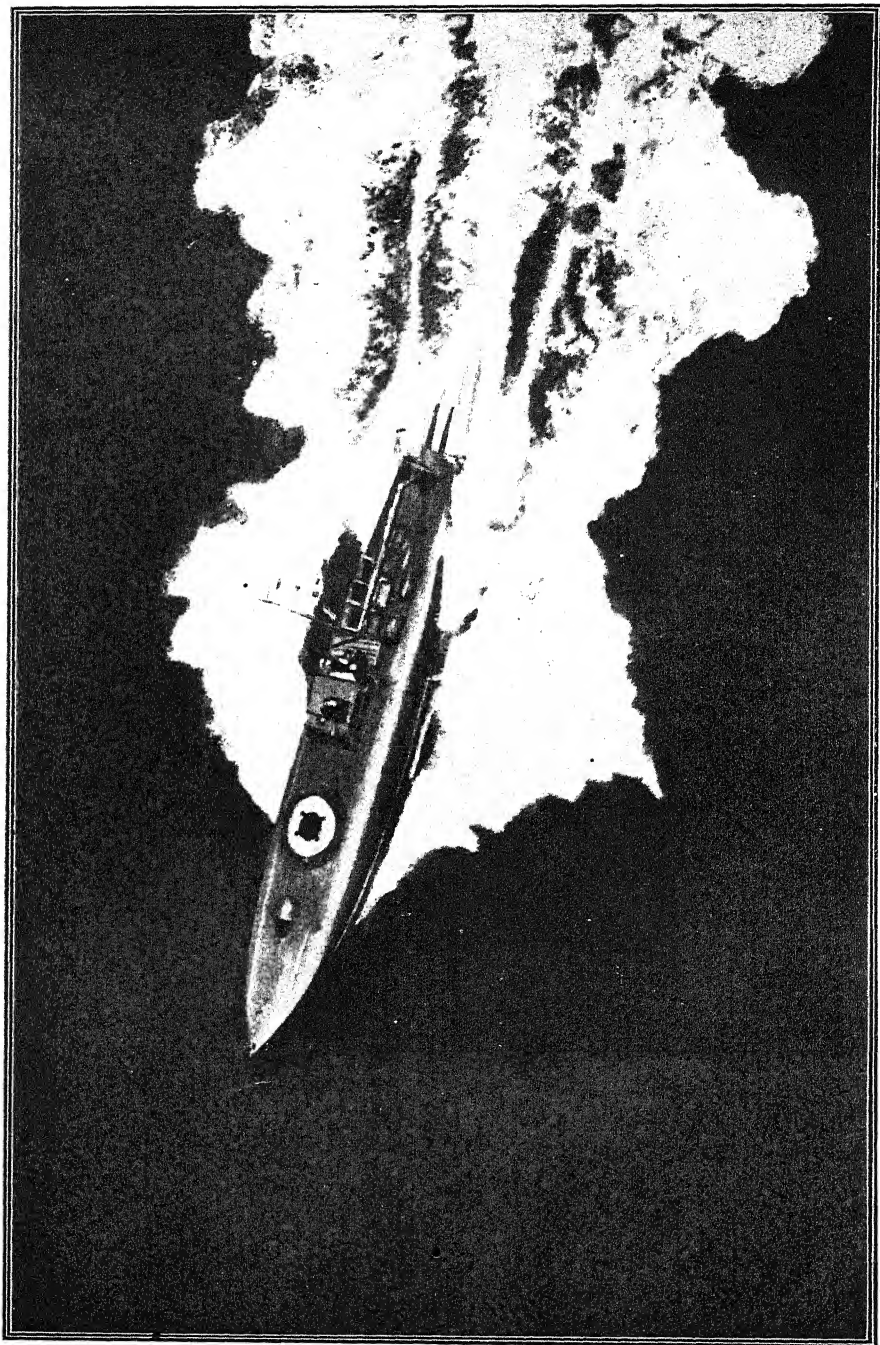
The war of 1914-18 was the first in which aircraft had been used on a large scale, and it ended before they had begun to co-operate closely with fleets at sea. At Jutland there were no torpedo-carrying aeroplanes nor heavy bombing machines, but in the future these two arms will have a considerable influence on naval action within easy air range of the combatant bases. The development of the torpedo, mine and submarine compelled the Allies to collect immense flotillas of small craft, which could only be kept in good order close to large industrial works. Without the support of the British iron, steel and machinery industries, the Grand Fleet must rapidly have lost its efficiency, and this was one of the arguments against a serious effort to force a way into the Baltic. Thus war for a naval Power at a distance from industrial centres has become extremely difficult, and surface naval force has become more localised than it has been at any date since the introduction of sail power in substitution for oar power.

The importance of the command of the surface was demonstrated but at no time did the Allies render it impossible for hostile submarines to get to sea. Warfare against commerce as conducted by the Germans failed. The submarine did not abolish the battleship and the only Dreadnought sunk by torpedo in the war was the Austrian SZENT ISTVAN, sunk by a tiny motor boat of 50 tons displacement.³ The destructive power of such insignificant vessels as coastal motor boats was one of the surprises of the war, but they are craft which can only operate in good weather, as from their small displacement and fragile build they cannot face heavy seas. None the less they have become a most formidable arm in narrow waters and they can be constructed and equipped with great speed

¹ See Command Paper, Cd. 9028, No. 13 (1918). Miscellaneous (British) Parliamentary Papers.

² Hall, *Law of Naval Warfare*, pp. 272-3.

³ The Dreadnought *Petropavlovsk* was similarly sunk in 1919 by torpedoes fired from British coastal motor boats.



A BRITISH COASTAL MOTOR BOAT AT HIGH SPEED, SEEN FROM THE AIR
Shows the type of vessel which sank the *Szent Istvan* and operated at Zeebrugge. Vessels of this kind were also largely used against the U boats and were equipped with depth charges. They ran on the surface of the water and could motor safely over minefields. They are a new weapon with great possibilities.

[PLATE 51
[See p. 314

COASTAL MOTOR BOATS

by any country possessing a large motor car and petrol engine industry. Many plans were prepared in 1917 and 1918 in England for the use of such vessels against the High Sea Fleet, they were not employed because the British Admiralty feared that the German Navy would immediately build them on a large scale and employ them in the waters near the Flemish coast.

The importance of secrecy and the danger of revealing movements by an indiscreet use of wireless were two of the outstanding lessons of the war. The British Staff in this matter was well ahead of the German Staff and showed a foresight, energy and ingenuity which are worthy of the very highest praise and have not, in the writer's opinion, received sufficient credit. It was quick in adopting directional wireless, and quick to make use of the MAGDEBURG's captured signal book. Under Sir Reginald Hall, the British Intelligence service was carried to a degree verging on perfection.

It is hardly going too far to say that it seemed to see into the mind of the German leaders and to anticipate their movements. There were but few occasions where it did not give warning in time. The question, however, has been raised by an able critic¹ whether this very excellence of the British information did not react on the energy of the British command, leading to a policy of "immediacy," or immediately reacting to the German moves, instead of forcing the Germans to follow and react to the British moves. Practical experience, both in the North Sea and in the Adriatic, showed how difficult it was in the modern conditions of war for the superior fleet to operate against the coast of an enemy or against his fleet in fortified bases behind mine fields.

The seizure of small islands which was considered by the Allies in the case of Heligoland in the North Sea and Curzola in the Adriatic, would have demanded large expenditure of force and would have brought, so far as can be seen, no adequate result. The instance of Pelagosa, on a minor scale, is full of warning. The Italians found it wiser to let the island go than to detach for it guns and men that could be better employed on their land front. The principle of the economy of force is strongly against petty operations of this kind; their one advantage is that they strengthen *moral*, and cause great depression in the hostile ranks when

¹ Captain A. C. Dewar, R.N.

BATTLESHIPS IN ACTION

prosecuted successfully. Complete inactivity, as the leaders of the High Sea Fleet found towards the close of the war, and as the commanders of the Austrian battleships realised in 1918, is disastrous in its effect on fighting men.

All the tactical teaching of the war emphasises the immense, indeed the overwhelming, importance of gunnery. A rapid and accurate fire is essential for victory. No system of control is satisfactory which does not permit a high rate of fire. It is difficult to suppose that, on all the occasions on which British ships fought gunnery actions with German ships, the advantage of light was on the German side; it does seem to be true that, as has already been pointed out, the Germans were quicker in getting the range and in placing their shells on their targets. In almost every engagement they scored the first hits and generally those hits were on vital parts of the ship attacked. This was even the case in the action between the *Sydney* and the *EMDEN*, where the *Sydney*, before hitting her antagonist, was struck on her forward range-finding station at the second salvo. In the same way the luckless *Good Hope*'s fire control was probably put out of action before she had made a hit.

As for the size of guns, experience both at the Dogger Bank and Jutland suggests that fire with more numerous guns of moderate calibre is more effective than a slower fire with a few large calibre guns. The evidence of the war is not at all decisive on this head; a good many German officers deplored the want of 15-inch guns in their ships in these two battles. But the fact remains that at Jutland five German battle cruisers, though engaged by four British battleships armed with the 15-inch gun, and six British battle cruisers armed with the 13.5 or 12-inch gun, inflicted much more loss with their 11-inch and 12-inch guns than they sustained. That they had conditions of light and atmosphere in their favour is certain; this is the one unknown factor in the problem. We do know that after the war the *BADEN*, when attacked by British battleships at target practice in what was presumably a favourable light, was destroyed by gun fire with astonishing speed. For work against modern destroyers no medium gun smaller than the 6-inch or 5.5-inch weapon proved powerful enough.

It is obviously important to practise squadrons in firing at high speed and in bad conditions of weather and light, if they are to be properly trained for battle. The reluctance to apply such training is understandable, as it does not

ALL-IMPORTANCE OF GUNNERY

necessarily give the palm to the gunners who are best and the ship which is most efficient in normal conditions. But the value of the experience obtained may well be priceless. It seems extraordinary that after vast expenditure on ships and guns, the total of time during which guns in an average ship are firing under conditions approaching faintly those of battle (battle conditions hitherto have rarely or never been reproduced) is not more than five minutes in the year. Practice makes perfect says our old proverb; and Jutland showed that the British Navy did not have enough gunnery practice or else that what practice it had was not of the right character.

It is known that Beatty had before the war, when in command of the battle cruisers, pressed for gunnery practice at high speed and extreme range. The delays which are so apt to occur in an ancient department and perhaps the resistance of those "obscure committees which" (as Hoche said) "often determine the fate of nations," prevented effect from being given to his representations before the war; and what practice the battle cruisers obtained in the war was extremely limited, from the risk of wearing guns.

Long range of guns is theoretically an important factor, but in actual practice, with high-angle mountings, the German guns of smaller calibre than the British were generally able to hit at as distant ranges as the British guns. Especially was this the case with the German 4.1-inch guns in the light cruisers, as against the 6-inch guns of old type mounted in so many of the British cruisers. The VON DER TANN's 11-inch guns could fire up to distances of 22,400 yards or over eleven miles, which in the North Sea proved about the limit of actual battle visibility; but the later types of 15-inch gun in both fleets had a range of twenty miles or more. Sir A. Chatfield, who was one of the most distinguished officers in the British battle cruisers, stated in 1920 that "in 90 cases out of 100 the factor which determines the range at which you will fight is the clerk of the weather." But for such operations as long-range bombardments, which experience shows may be required, it is important to provide guns ranging to a great distance.

The necessity of good armour protection in ships which will have to lie in line was demonstrated. Gun-shields in severe actions proved unsatisfactory; they did not give sufficient defence against splinters and fragments of high explosive shells in action, and the casualties to gun crews behind them

BATTLESHIPS IN ACTION

were often heavy. When possible and where the weight permits the secondary battery should be in closed turrets or casemates. Heavy gun turrets require thorough protection by thick armour on the sides and roofs. One of the surprises of the war was the frequency of hits on turrets even at enormous ranges, and the tendency, where turrets were grouped in too close proximity (as in the SEYDLITZ and BLÜCHER) for both turrets of a pair to be affected by one hit. The evidence of battle is thus strongly in favour of distribution of risk by spacing the turrets some distance apart, and strongly against concentration of many guns in one turret—as for instance four guns in the turrets of the designs before the war prepared for the French ships of the *Normandie* class.

Against this, it is argued that with the concentration of guns, much greater protection can be given, because there are fewer positions to defend with armour. But even where there is no penetration, a hit by a salvo of 15-inch or 16-inch projectiles may shake the mechanism of a turret so severely as to cause the breakdown of mechanical loading, when the fire rate sinks to an extremely low figure. The general opinion of those who went through the war in large armoured ships is that, for the line, the vitals and the heavy guns must be given a thorough defence of thick armour; and the armour deck must be thick over the magazines to resist projectiles falling at a steep angle, and aircraft bombs.

A further argument against too great concentration of heavy guns in turrets is that it seems calculated to slow the rate of fire. With the 15-inch gun observation of drill during the war showed that it was possible to load such guns paired in turrets three times a minute,¹ which would give a maximum rate of fire in battle of about one salvo (from one gun per turret) in thirty seconds, allowing for practical difficulties. With three guns per turret it is difficult to suppose that a rate of more than one salvo per thirty seconds could be maintained from one gun per turret and this means that three guns in a given time discharge no more projectiles than two. To fire two or three simultaneously in each turret would mean great strain on men and material, such as war experience led both sides to avoid. Gunnery opinion favours the view that the salvo for battle conditions should not number fewer than four projectiles and objection was taken in the

¹ I saw these guns loaded three times a minute in one of the *Revenge's* turrets in 1916.

TURRETS AND ARMOUR

British Navy to the *Renown* type on the ground that salvoes of three projectiles were necessary with it.

The importance of thorough protection of ammunition against the flash of shells and fires is not likely to be overlooked after the loss of so many British ships. Automatic doors, cutting off magazines and charges in the lifts, have everywhere been introduced; they were employed in certain foreign ships before the war, but their value appears to have escaped the attention of the British Staff. The men themselves need special clothing (or gauntlets and masks) to protect them against flash and fires. A relatively small degree of such protection may save life, as was proved in the case of one of the numerous bad cordite fires at Jutland, where a boy escaped who threw himself down and placed his head under a mat. Strong boots are essential in view of the sharp splinters of steel and the quantity of glass about on the decks of a ship that has been exposed to heavy projectiles.

The tripod mast, as adopted in almost all British ships of large size, proved its value and resisted shells excellently. Its superior rigidity for director control makes it better than the United States type of basket mast. The tripod was introduced by the German Navy during the war; it appeared in the BLÜCHER, DERFFLINGER,¹ HINDENBURG and in the BADEN class. In British heavy ships of the war period high topmasts were discarded, but the process of getting rid of them had begun before the war. The Germans, after a period in which they fitted comparatively low masts, reverted to an exceedingly high topmast in the BADEN class.

The value of speed was proved, though Sir A. Chatfield rates it as of far less importance than protective qualities. The British battle cruisers were slightly superior to the Germans in the North Sea in this respect, and were able to force on battle in consequence, and to get away when, as at Jutland, the German Battle Fleet was operating in conjunction with the battle cruisers. The GOEBEN's superiority in speed was the chief cause of her escape from the British in the Mediterranean, which had disastrous consequences for the Allies. In the battle of the Falklands the British superiority of speed enabled Sturdee to fix the conditions of action so as to suit the armaments of his ships, and prevented any possibility of Spee escaping with the two heavy German ships. The KARLSRUHE was able to elude the *Bristol* because

¹ After the battle of Jutland, where she had only two low masts of the usual German type.

BATTLESHIPS IN ACTION

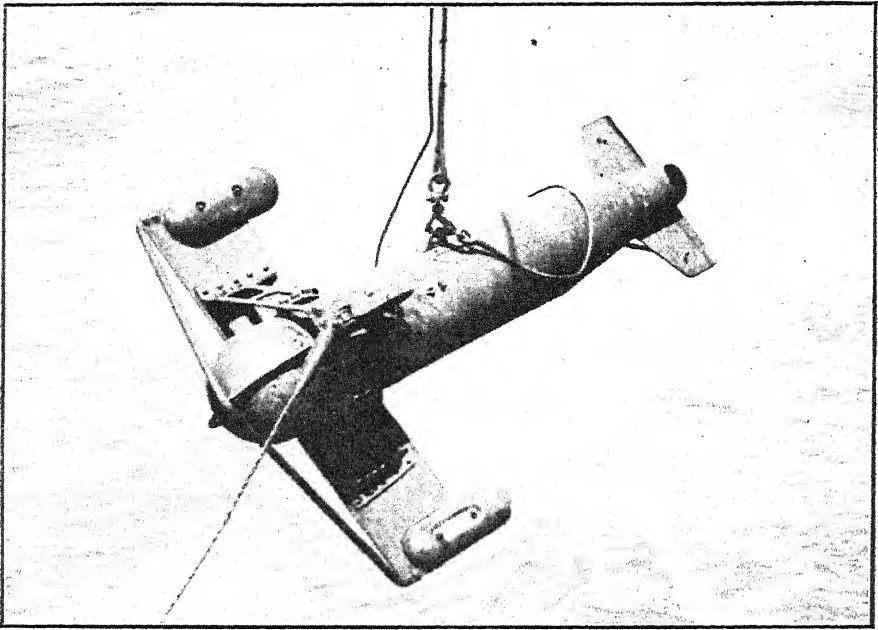
she was faster, and in her case escape meant grievous loss to Great Britain. In the Adriatic, the Allied cruisers could accomplish little because they were slightly inferior in speed to the Austrian ships, which could always get away. High speed is most of all necessary in light cruisers and in vessels engaged in commerce protection.

The part played by mines in the earlier period of the war was of extreme importance. But with the introduction of the paravane,¹ which protected moving vessels against anchored mines, the value of this weapon distinctly declined. Rapid methods of sweeping were devised, and it is scarcely an exaggeration to say that at the close of the war mine fields exerted but a small menace so far as the Allied Fleets and Squadrons were concerned. Merchant ships, as soon as supplies were available, were equipped with earlier types of paravane and thus given a large degree of security. The Germans devised an inferior type of paravane which was distinctly less effective; and thus towards the end of the war while the British had a large degree of protection, the Germans remained exposed to peril from mine-fields.

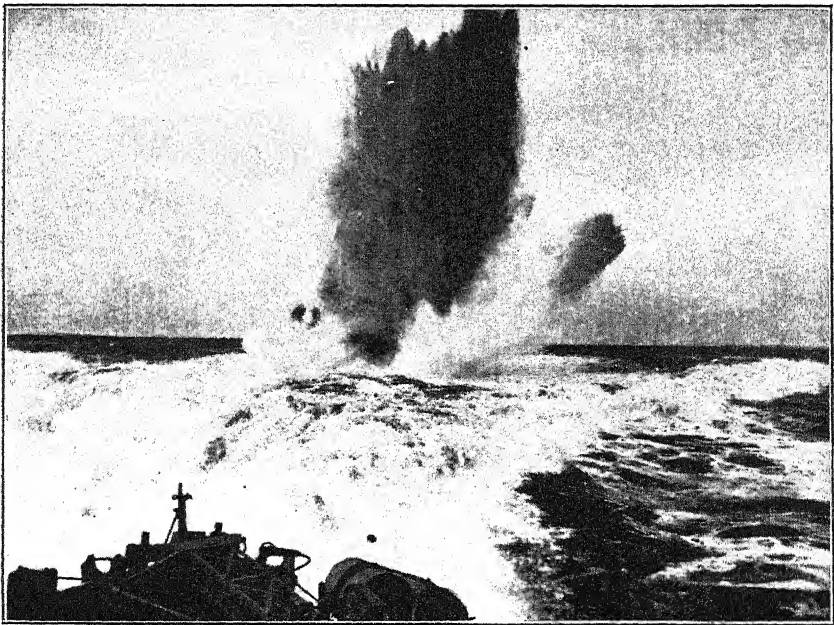
Throughout the Great War, as throughout earlier naval wars, chance, or the factor which cannot be exactly gauged or explained, intervened repeatedly. The escape of the GOEBEN from action with the greatly superior forces of the Allies was in large part due to it. The wireless messages from the British commander in the Mediterranean and from the French Government to the French Commander in that sea, failed to get through at critical moments; and a mistake in London recalled admiral Milne when he was in full pursuit of Souchon in the German battle cruiser. The EMDEN escaped on one occasion because heavy rain squalls came down and hid her from the *Hampshire*, when that British cruiser was close at hand. It is a question whether Spee might not have eluded his fate for a considerable period if he had not been delayed by the capture of a sailing ship laden with coal off Cape Horn. The time taken in dealing with her enabled Sturdee to arrive at the Falklands.

At the Dogger Bank, the German shell which put out of action the *Lion's* condensers saved Hipper's squadron in all probability from a decisive defeat. At Jutland the almost

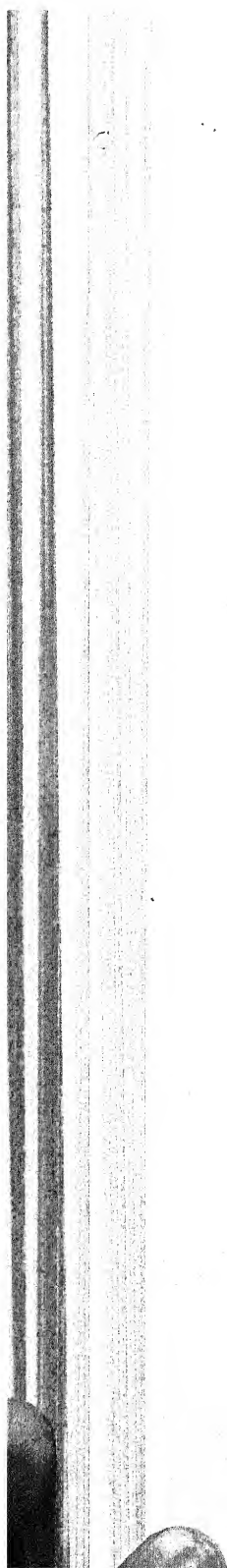
¹ The paravane looked like a little torpedo; it was towed by steel rope from the stern of the ship, one on each side, and could be set to run at a depth of fifty feet from the side and 150 feet from the bow. It grappled mine moorings and cut them, when the mine came to the surface and was destroyed. See *Naval Annual*, 1919, pp. 411-13, and L. Cope Cornford's *Paravane Adventure*.



A paravane being hoisted out. Towards the close of the war all warships carried a pair of these paravanes, towed in the water by steel wire rope, one on each side near the bows. They picked up and cut mine moorings, so that the mine came to the surface and was destroyed. [See p. 320]



Explosion of a depth charge. These were used for the attack on submarines and were perfected during the war. They were generally of two sizes, with 300 lb. or 120 lb. of high explosive, and from 4 to 40 were carried by each British destroyer. To the right in the stern of the vessel, from which this view was taken, a depth charge can be seen.



CHANCE IN WAR

incredible chance of two shells in succession hitting in the same place (which occurred also at Tsushima in the Oslabia) caused cruel loss of life and might well have ended the career of the *Malaya*. Had Jellicoe received the mention of Horns Reef which occurs in the German signals,¹ the victory for the British might have been beyond dispute.

In battle, again, certain men and ships seem to have a charmed existence. Togo stood out in the open as did Beatty, and though splinters and masses of metal flew past them, neither was touched. The *Lion* was hit in a magazine at the Dogger Bank, and in a turret at Jutland as badly as the *Invincible*, and in much the same place, but she did not blow up. So it may be said of fortune as of the golden bough in the poet's words:

Itself will follow, and scarce thy touch await,
If thou be chosen, and if this be fate;
Else for no force shalt thou its coming feel,
Nor shear it from the stem by shattering steel.

The unsuccessful fleet has often an unlucky commander. Thus the issue of the battle of August 10, 1904, was decided by the shell which killed Vitgeft, and the splinters which disabled all in the Tzesarevitch's conning tower. The shell which wounded Rojestvensky in the conning tower at Tsushima contributed to the collapse of the Russian Fleet. Again, when in April, 1904, two Russian battleships struck mines off Port Arthur, the Petropavlosk which had on board Makaroff, whose life was vital for the Russians, blew up, whereas the Pobieda was little damaged.

What can be said is that chance is a factor which injures least the able and energetic. Nelson in his famous Trafalgar memorandum noted that "something must be left to chance; nothing is sure in a sea fight beyond all others."² Napoleon said that fortune was like the force which in rivers makes the stream; he repeatedly pointed out that war is composed of accidents, and that it was the special quality of genius to use them to the utmost. "The great men," he said, "know how to master fortune. He who studies the causes of their success is astonished to find that they took every possible step to win it."³

¹ *Nordsee*, v, p. 533.

² After his chief orders had been issued and the fleets were closing he remarked to a friend: "Now I can do no more. We must trust to the Great Disposer of all events."

³ *Las Cases, Memorial*, vii, p. 178.*

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Almost every incident of the war demonstrated the need for a carefully organised staff, studying not "gunnery nor machinery nor fleet-tactics alone, but the science of WAR, in all its bearings, as an actual, living and above all as a growing science."¹ The successive changes in the British Admiralty were caused by the breakdown of the old peace methods and the resolute groping for something new and better—though incidentally the new organisation was in certain respects a reversion to that of the Napoleonic wars. The final form was not by any means ideal;² thus the conduct of the war was divided between three departments—surface war in home waters, submarine war, and war in distant waters—a division which cannot be justified in theory or practice. But at least it was dominated by the spirit of action and the determination to look ahead.

The effect of the land and sea blockade on Germany and Austria is admitted by all German authorities to have been disastrous and to have been one of the chief causes of the German collapse.³ There has been a German tendency to represent the blockade as inhuman and cruel, but the actual truth is that the first move towards cutting off foodstuffs from a civilian population was made by the German cruiser KARLSRUHE when she stopped the neutral Maria with wheat for British ports at the very outset. In any case a naval blockade is precisely analogous to a siege and entirely legitimate. It was the need for materials out of which to make high explosives quite as much as a reduction in imports that emptied the German larder. The decline in German *moral* at the front, which became noticeable in 1918, was in large part due to the depression at the rear in Germany produced by insufficient food and warmth, which again was caused by the stoppage of manures, fats and oils, and foodstuffs, or by their diversion for the making of nitro-glycerine.⁴

In accordance with experience in the past the blockade worked very slowly, but its effect in the end was none the less crushing. The German States, unlike the Confederacy in the Civil War, had an admirable railway system—the best on the Continent—and had attained the highest degree of industrial development, and they were not affected to the

¹ Soley. *Blockade and the Cruisers* (United States Civil War) p. 234.

² Castex, p. 184.

³ Cf. Nowak, *Sturz der Mittelmächte*, p. 51 ff for Austria. Bauer, *Grosse Krieg*, pp. 152, 286. Ludendorff, *Kriegserinnerungen*, p. 420 ff. Tirpitz, *Erinnerungen*, p. 383.

⁴ Cf. Parmalee, p. 245, "Almost without exception (by Germans) the defeat of Germany and its Allies was attributed to the blockade."

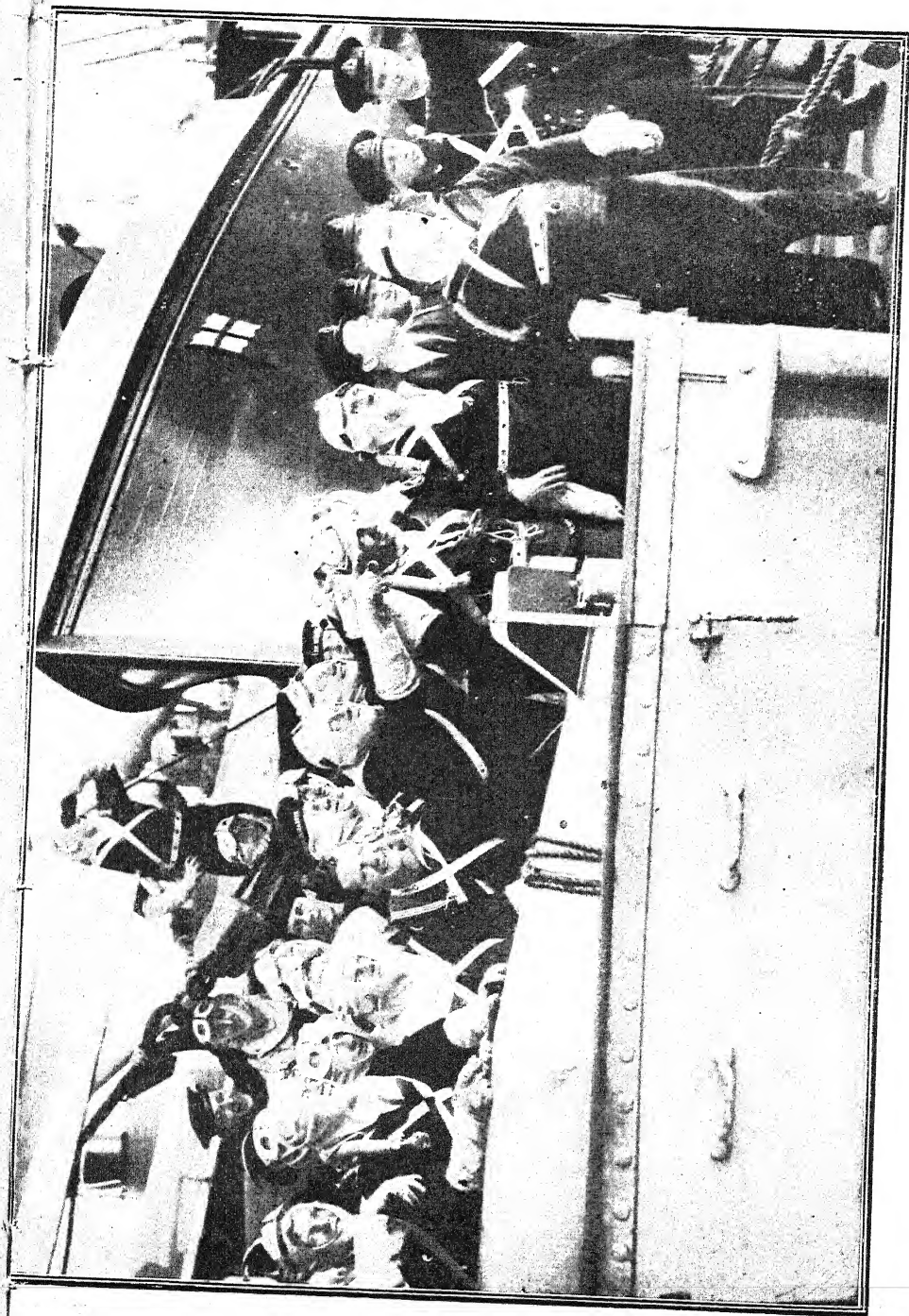


PLATE 53

Crew of the *Queen Elisabeth* at Rosyth watching the surrender of the German Fleet. The men are wearing the protective covering for head and hands. Their ship was repeatedly under fire at the Dardanelles, but was undergoing a refit at the date of Jutland and was not in that battle.

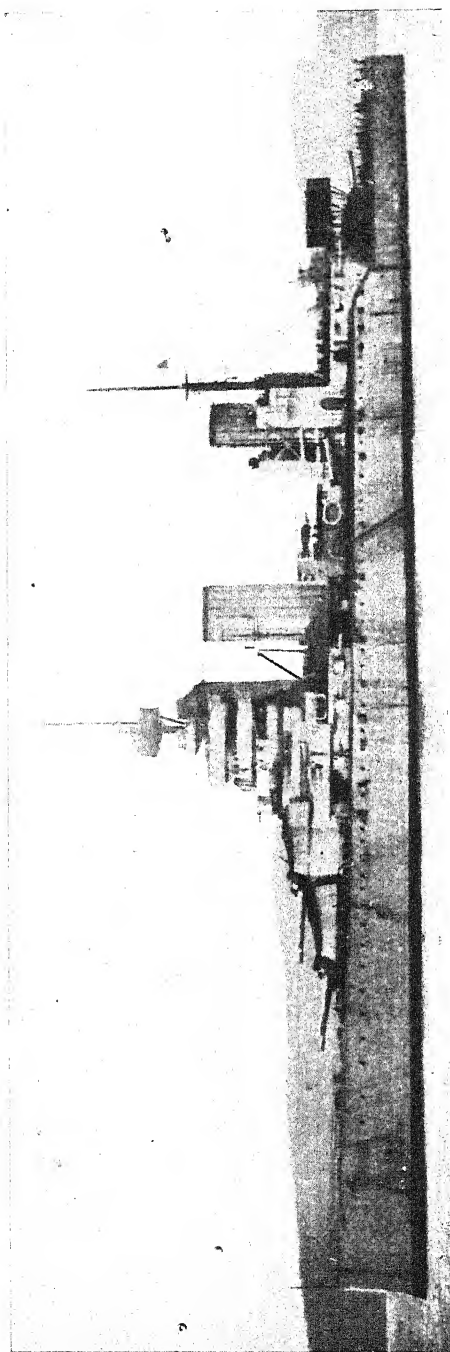


PLATE 35A.

THE BRITISH BATTLE CRUISER "LION"

This famous ship was a sister of the *Queen Mary* (illustration p. 176). She flew Beatty's flag when he was in command of the Battle Cruiser Force, and was under severe fire at Jutland, with heavy casualties. The rig is that which she carried late in the war. See following illustration for arrangement of her turrets.

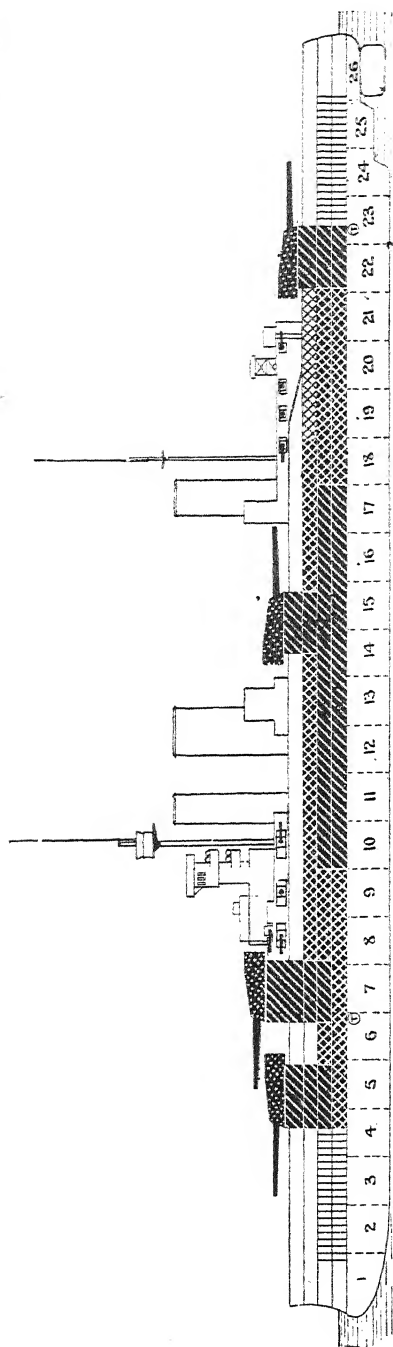
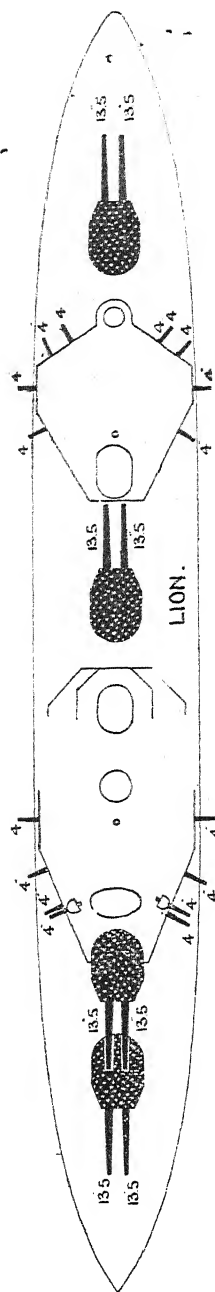


PLATE 35B.

p. 162

This elevation of the *Lion* shows the arrangement of her armour. The thickness of the plating varies according to the blackness of the shading; the lightest shaded is the thinnest armour. The arrangement of plating in the German battle cruisers was similar, but the thickness of armour greater.



This deck plan of the *Lion* shows how her turrets (each containing two 13.5-inch guns) were arranged. Q turret, where the great fire at Jutland occurred, is amidships.

GERMAN FLEET SURRENDERS

same extent as the Confederacy by currency troubles and difficulties of transport, which had so much to do with the collapse of the South. Hence the effect of the blockade was only severely felt after the lapse of three or four years.

The mutiny in the German Fleet at the end of October, 1918, prevented any final battle from being delivered against the British and United States forces in the North Sea. By the terms of the Armistice which took effect on November 11, 1918, the Germans were required to surrender all submarines in fourteen days, and also to send six battle cruisers, ten battleships, eight light cruisers and fifty destroyers of the latest type for internment either in neutral or Allied ports. As the battle cruiser MACKENSEN was quite incomplete, the battleship BADEN was substituted for her. Though the Allied blockade was still to continue, all hostilities were to cease. These conditions were duly carried out and as no neutral would accept the serious risk of guarding the interned fleet, internment in a British harbour was finally ordered.

On November 21, the German Fleet under Vice-Admiral von Reuter, arrived off Rosyth where it was met by the whole Grand Fleet, 260 ships strong (including the United States 6th Battle Squadron and a small French Squadron), under Beatty, who thus conducted his last operation of the war. The force surrendering numbered fourteen capital ships (five battle cruisers and nine battleships), seven light cruisers, and forty-nine destroyers, to which two battleships, one light cruiser and one destroyer, were subsequently added. It was escorted into Rosyth, where at sunset the German flag was hauled down by Beatty's order. The ceremony was impressive beyond imagination as that grey winter afternoon the bugle rang out in the *Queen Elizabeth*, "making it sunset," and the German flags came down. It was the end of an age and the date when the British Navy achieved its final victory; but we may hope not the date when it passed its zenith.

The German ships were subsequently escorted to Scapa Flow, where they remained in the charge of care and maintenance parties. By the Armistice terms the British had no right to place men on board them and had no control over their internal discipline. At Scapa most of these ships were sunk by their crews under Admiral von Reuter on June 21, 1919, in accordance with orders from Germany, only the BADEN, three light cruisers, and four destroyers, being saved by being beached before they went down. The fleet was sunk to prevent its final surrender, which was among the conditions

BATTLESHIPS IN ACTION

of peace: the act of sinking it was a distinct breach of international law¹ and was met by requiring additional reparation from the German Government. There was some small loss of life among the German crews who were fired upon for disobeying British orders by armed British boats.² The last German vessel to go down was the HINDENBURG which, at 5 p.m. was submerged to the tops of her turrets. In the now deserted waters of Scapa Flow the rusting wrecks of most of the ships in this once famous Fleet still lie, though a number of the smaller craft were salvaged and broken up, and some of the larger ships were in 1926 being raised for the metal in them.³ Of submarines, 158 were surrendered by the German Navy in 1918.

The British casualties at sea in the war were 22,207 killed in action, 11,320 died from other causes, 5,190 wounded, 905 prisoners, 271 interned and 47 missing, a total of 39,940. In addition to these the merchant service suffered a loss of 14,661 killed with a considerable number of wounded which cannot be exactly stated. The German loss was 24,112 seamen and petty officers killed or died, 29,830 wounded,⁴ and 11,654 prisoners. These figures do not include officers and are not definitive. Accurate returns for the losses of the Allied and Austrian navies are not yet available.

The total of officers and men serving in the British Navy stood at 420,301 in November, 1917, including in that figure 45,992 officers and men of the Royal Naval Air Service. After that service had been separated from the Navy in early 1918, the strength of the Navy remained about 400,000, and stood at 407,316 officers and men at the Armistice.

¹ Oppenheim, ii, p. 328.

² Reuter states that 4 were killed and 8 wounded. *Scapa Flow*, p. 101.

³ The following are the names of the capital ships and cruisers of the German Navy interned at Scapa: Battleships, BADEN, BAYERN, FRIEDRICH DER GROSSE, GROSSER KURFÜRST, KAISER, KAISERIN, KÖNIG, KÖNIG ALBERT, KRONPRINZ WILHELM, MARKGRAF, PRINZREGENT LUITFOLD; Battle cruisers, HINDENBURG, DERFFLINGER, SEYDLITZ, MOLTRE, VON DER TANN; Cruisers, BREMSE, BRUMMER, DRESDEN, EMDEN, FRANKFURT, KARLSRUHE, KÖLN, NÜRNBERG.

⁴ In this total, losses in the German naval forces in Flanders engaged on land must be included.

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For meaning of Abbreviations, etc., see Bibliography Vol. I.

§ 27—THE GREAT WAR.

As new books dealing with the war by sea, land and air are appearing almost daily, no list can be complete. The present bibliography gives only some of the most important books, and omits many valuable and interesting works.

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J. VIC. *La Literature de la Guerre*. 2 vols. Paris, 1918. Gives many contemporary works and pamphlets.

PERIODICALS.

Owing to the severe censorship everywhere enforced in the Great War much information had to be withheld by periodicals, and several ceased publication during the war, resuming issues again after the Armistice. The most useful are:

Engineer, Engineering, Army and Navy Gazette, Aeroplane.

RIG OF SHIPS

For illustrations of ships in war rig, which often differed greatly from the rig before and after 1914-18, see the large collection of photographs in the Imperial War Museum, which mainly concerns British ships. The rig varied at different dates in the war and was affected by the general introduction of aeroplane fittings in 1917 and 1918.

§ 28—GENERAL HISTORY.

The British signals and documents are not yet accessible, except those published in the *Futland Despatches*.

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*A. HURD. *The Merchant Navy*. Vols. I- . London, 1921. In progress. Much valuable information from documents.

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*C. E. FAIRBANKS. *Seaborne Trade*. 3 vols. London, 1920-24. Necessary for knowledge of economic working of the blockade.

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J. BUCHAN. *A History of the Great War*. 4 vols. London, 1921-22. A revised edition of the excellent general history issued by the same author during the war in twenty-four volumes. Gives a contemporary view, but largely affected by more recent information.

T. G. FROTHINGHAM (Capt., U.S.A.). *Naval History of the World War*. Vol. I-. In progress. Cambridge, U.S.A., 1924-.

The Times Documentary History of the War (Naval). Parts 1-4. London, 1917-20. Publication suspended. Gives published documents, statements and parliamentary debates down to early 1915. Useful.

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M. SCHWARTZ (Lieut.-Gen., I.G.A.). *Der Grosse Krieg*. Vol. 4. Der Seekrieg. Sections by Rear-Adm. E. Heydel, Comm. O. Groos and other naval officers. Leipzig, 1922. A compact German account of the sea war, but with many suppressions of fact.

*A. C. DEWAR (Capt., R.N.). *Encyclopædia Britannica*. 12th Edition. London, 1921-22. A series of important articles based on direct study of the documents. Most valuable.

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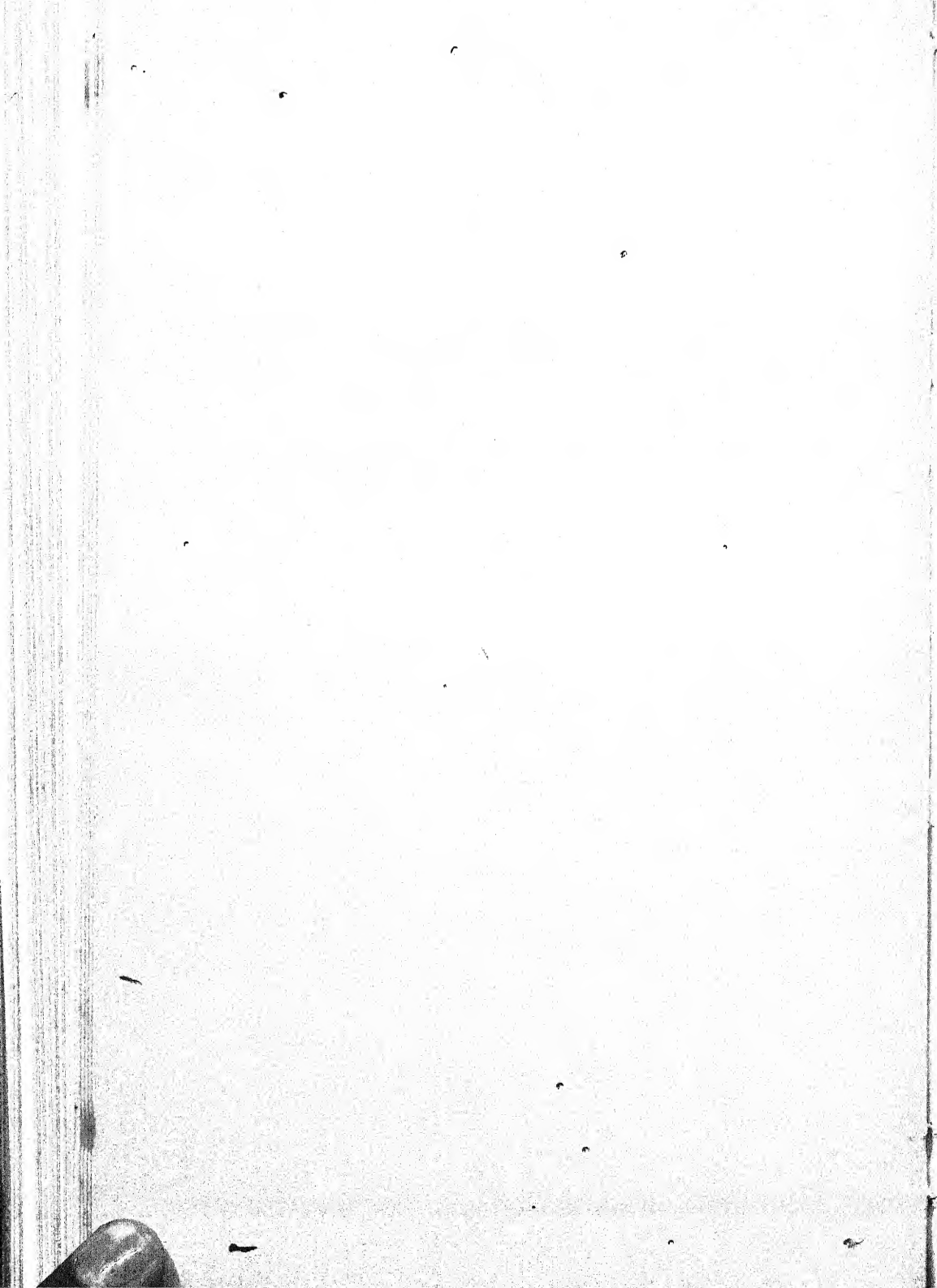
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TABLES

TABLE XX. BRITISH FLEET AT JUTLAND.

1ST BATTLE SQUADRON.

- 2 Marlborough (Vice-Adm. Sir C. Burney)
- 1 Revenge
- 4 Hercules
- 3 Agincourt
- 4 Colossus (Rear-Adm. Gaunt)
- 5 Collingwood
- 4 Neptune
- 5 St. Vincent
- Light cruiser *m* Bellona

2ND BATTLE SQUADRON.

- King George V (Vice-Adm. Sir M. Jerram)
- 2 Ajax
- 2 Centurion
- 2 Erin
- 2 Orion (Rear-Adm. Leveson)
- 2 Monarch
- 2 Conqueror
- 2 Thunderer
- Light cruiser *m* Boadicea

1ST CRUISER SQUADRON.

- c* Defence (Rear-Adm. Sir R. Arbuthnot)
- d* Warrior
- c* Duke of Edinburgh
- c* Black Prince

4TH LIGHT CRUISER SQUADRON

- k* Calliope (Commod. Le Mesurier)
- k* Constance
- k* Comus
- k* Caroline
- k* Royalist

DESTROYER FLOTILLAS. *k* Castor (light cruiser) Commod. Hawksley.

4TH FLOTILLA.

- Tipperary
- Broke
- Achates
- Porpoise
- Spitfire
- Unity
- Garland
- Ambuscade
- Ardent
- Fortune
- Sparrowhawk
- Contest
- Shark
- Acasta
- Ophelia
- Christopher
- Owl
- Hardy
- Midge

11TH FLOTILLA

- Kempenfelt
- Ossory
- Mystic
- Moon
- Morning Star
- Magic
- Mounsey
- Mandate
- Marne
- Minion
- Manners
- Michael
- Mons
- Martial
- Milbrook

12TH FLOTILLA

- Faulknor
- Marksmen
- Obedient
- Maenad
- Opal
- Mary Rose
- Marvel
- Menace
- Nessus
- Narwhal
- Mindful
- Onslaught
- Munster
- Nonsuch
- Noble
- Mischief

BATTLE CRUISER FORCE

- 1st Battle Cruiser Squadron
- a* Lion (Vice-Adm. Sir D. Beatty)
- a* Princess Royal (Rear-Adm. Brock)
- a* Queen Mary
- a* Tiger

2nd Battle Cruiser Squadron

- b* New Zealand (Rear-Adm. Pakenham)
- b* Indefatigable

5TH BATTLE SQUADRON: 1 Barham (Rear-Adm. Evan-Thomas), 1 Valiant, 1 Warspite, 1 Malaya

1ST LIGHT CRUISER SQUADRON

- k* Galatea (Commod. Alexander-Sinclair) *
- k* Phaeton
- k* Inconstant
- k* Cordelia

2ND LIGHT CRUISER SQUADRON.

- g* Southampton (Commod. Goodenough)
- g* Birmingham
- g* Nottingham
- g* Dublin

TABLES

TABLE XX.—BRITISH FLEET *contd.*

3RD LIGHT CRUISER SQUADRON

g Falmouth (Rear-Adm. Napier)
g Yarmouth
h Birkenhead
f Gloucester

Aircraft Carrier Engadine

1st Flotilla
Fearless (lt. cruiser)
Acheron
Ariel
Attack
Hydra
Badger
Goshawk
Defender
Lizard
Lapwing

13th Flotilla.
h Champion (lt. cruiser)
Nestor
Nomad
Marlborough
Obdurate
Petard
Pelican
Nerissa
Onslow
Moresby
Nicator

9th and 10th Flotillas
Lydiard
Liberty
Landrail
Laurel
Moorsom
Morris
Turbulent
Termagant

BROADSIDES—

1. Eight 15-in. 2. Ten 13.5-in. 2a. Ten 14-in. 3. Fourteen 12-in. 4. Ten 12-in. 5. Eight 12-in. a. Eight 13.5-in. b. Eight 12-in. c. Four 9.2-in., five 7.5-in. d. Four 9.2-in., two 7.5-in. e. Four 9.2-in., five 6-in. f. Three 7.5-in., three 6-in. g. Five 6-in. h. Six 5.5-in. k. Four 6-in. l. Five 4-in. m. Three 4-in.

GERMAN FLEET AT JUTLAND

3RD SQUADRON

1 König (Rear-Adm. Behncke)
1 Grosser Kurfürst
1 Markgraf
1 Kronprinz
1 Kaiser (Rear-Adm. Nordmann)
1 Prinz. Luitpold
1 Kaiserin
1 Friedrich der Grosse (Vice-Adm. Scheer)

1ST SQUADRON

2 Ostfriesland (Vice-Adm. Schmidt)
2 Thüringen
2 Helgoland
2 Oldenburg
3 Posen (Rear-Adm. Engelhardt)
3 Rheinland
3 Nassau
3 Westfalen

2ND SQUADRON

4 Deutschland (Rear-Adm. Mauve)
4 Pommern
4 Schlesien
4 Schl. Holstein
4 Hannover (Rear-Adm. Lichtenfels)
4 Hessen

1ST SCOUTING GROUP

a Lützow (Rear-Adm. Hipper)
a Derfflinger
b Seydlitz
b Moltke
c Von d. Tann

2ND SCOUTING GROUP

d Frankfurt (Rear-Adm. Boedicker)
d Pillau
d Elbing
d Wiesbaden

3RD SCOUTING GROUP

e Stettin (Commod. Reuter)
e München
e Frauenlob
e Stuttgart
e Hamburg

DESTROYER FLOTILLAS. d Rostock (lt. cruiser, Commod. Michelsen). d Regensburg, (lt. cruisers, Commod. Heinrich).

1st Half-Flotilla, G 39, G 40, G 38, S 32.
3rd Half-Flotilla, B 98, G 101, G 102, B 112, B 97.
4th Half-Flotilla, B 109, B 110, B 111, G 103, G 104.
5th Half-Flotilla, S 53, V 71, V 72, G 88.
6th Half-Flotilla, S 54, V 48, G 42.
9th Half-Flotilla, G 11, V 2, V 4, V 6, V 1, V 3.
10th Half-Flotilla, G 8, G 7, V 5, G 9, G 10.
11th Half-Flotilla, G 41, V 44, G 87, G 86.
12th Half-Flotilla, V 69, V 45, V 46, S 50, G 37.
13th Half-Flotilla, S 24, S 13, S 17, S 20, S 16, S 18.
14th Half-Flotilla, S 19, S 23, V 189.
17th Half-Flotilla, V 28, V 27, V 26, S 36, S 51, S 52.
18th Half-Flotilla, V 30, S 34, S 33, V 29, S 35.

BROADSIDES—

1. Ten 12-in. 2. Eight 12-in. 3. Eight 11-in. 4. Four 11-in., seven 6.7-in. a. Eight 12-in. b. Ten 11-in. c. Eight 11-in. d. Five 6-in. e. Five 4.1-in.

TABLES

TABLE XXI.

GUNS MOUNTED IN THE CAPITAL SHIPS OF THE TWO
FLEETS OF 11-IN CALIBRE AND OVER AT JUTLAND

	No. of Guns.	Guns on Broadside.	Weight of Metal. Broadside, lb.	Approx. No. of Rounds Fired.
BRITISH—				
15-in. ...	48	48	82,560	1239
14-in. ...	10	10	14,000	42
13.5-in. ...	142	142	183,550	1533
12-in. ...	144	132	112,200	1784
	344	332	392,310	4598
GERMAN—				
12-in. ...	144	128	110,080	2424
11-in. ...	100	84	55,440	1173
	244	212	165,520	3597

TABLES

TABLE XXII.
BRITISH SHIPS IN LINE AT JUTLAND.

BATTLE SHIPS IN LINE AT JUTLAND.										
No. in Battle	Class of Ship.	Nom. Displacement.	Speed.	Submerged Torpedo Tubes.	ARMOUR AND PROTECTION.			Turret Front.	Protected Decks.	MAIN TYPE. Battery.
					Main Belt.	Upper Belt.				
BATTLE CRUISERS										
4	<i>TLE CRUISER Lion</i> ...	26,350	28.5	2	9	6	9	1 to 2½	VIII 13.5-in. 45 cal., XV 4-in. (XII 6-in. in Tiger.)	
2	<i>New Zealand</i> ...	18,810	26.5	2	7	none	7	1 to 2½	VIII 12-in. 50 cal. XIV 4-in.	
3	<i>Inflexible</i> ...	17,250	26	4	7	none	7	½ to 2½	VIII 12-in. 45 cal., XII 4-in.	
BATTLESHIPS.										
2	<i>Revenge</i> ...	25,750	22.5	4	13	6	13	1 to 4	VIII 15-in. 42 cal., XIV 6-in.	
4	<i>Barham</i> ...	27,500	25	4	13	6	13	1 to 3	VIII 15-in. 42 cal., XII 6-in.	
3	<i>Iron Duke</i> ...	25,110	22	4	12	9 & 8	11	1 to 2½	X 13.5-in. 45 cal., XII 6-in.	
3	<i>King George V.</i> ...	23,000	21	2	12	9 & 8	11	1½ to 4	X 13.5-in. 45 cal., XII 4-in.	
4	<i>Orion</i> ...	22,500	21	2	12	9 & 8	11	1½ to 4	X 13.5-in. 45 cal., XII 4-in.	
1	<i>Agincourt</i> ...	27,500	22	3	9	6	12	1 to 1½	XIII 4-in. XIV 12-in. 50 cal., XX 6-in.	
1	<i>Erin</i> ...	23,000	21	3	12	9 & 8	11	1½ to 3	X 13.5-in. 45 cal., XVI 6-in.	
1	<i>Canada</i> ...	28,000	22.7	4	9	7 & 4½	10	1½ to 4	X 14-in. 45 cal., XII 6-in.	
3	<i>Hercules</i> ...	20,000	21	2	11	8	11	1½ to 4	X 12-in. 50 cal., XIII 4-in.	
3	<i>St. Vincent</i> ...	19,250	21	2	10	8	11	½ to 3	X 12-in. 50 cal., XIII 4-in.	
3	<i>Bellerophon</i> ...	18,600	21	2	10	8	11	½ to 3	X 12-in. 45 cal., XII 4-in.	

GERMAN SHIPS IN LINE AT JUTLAND.

BATTLE CRUISERS									
2	<i>DERFFLINGER</i> ...	26,200	27	4	12	8	11	1 to 3½	VIII 12-in. 50 cal., XII 6-in.
2	<i>SEYDLITZ</i> ...	24,600	27	4	11	8	10	1 to 3½	X 11-in. 50 cal., XII 6-in.
1	<i>VON DER TANN</i> ...	19,100	MOLTKE slightly	slightly smaller, but 8½	9½	7	other wise all 8½	1 to 3½	particulars identical. VIII 11-in. 45 cal., X 6-in.
BATTLESHIPS.									
4	<i>KÖNIG</i> ...	25,300	23	5	14	10	14	2½ to 3	X 12-in. 50 cal., XIV 6-in.
4	<i>KAISER</i> ...	24,400	22	5	13½	8	12	1½ to 4	X 12-in. 50 cal., XIV 6-in.
4	<i>HELGOLAND</i> ...	22,400	21	6	12	8	12	1½ to 2½	X 12-in. 45 cal., XIV 6-in.
4	<i>NASSAU</i> ...	18,600	20	6	12	8	11	2 to 4½	X 11-in. 45 cal., XII 6-in.
6	<i>DEUTSCHLAND</i> ...	12,990	18½	6	9½	8	11	1½ to 3	IV 11-in. 40 cal., XIV 6.7-in.

For British Heavy Gun details, see Table XIII, Vol. I.

GERMAN HEAVY GUNS. WAR PERIOD. From Official German Table.

	Length of Bore in Calibres.	Weight in Tons.	Weight of Shell lbs.	Charge lbs.	Muzzle Velocity. Ft. Secs.	Muzzle Penetration. Inches Steel.	Ft. Tns. Energy of Gun at Muzzle.	Ft. Tns. Energy of Gun at Muzzle. Per Ton Wt. of gun
11-in.	40	29	660	209	2750	32	34,800	1200
11-in.	45	32	660	242	2920	35	39,000	1200
11-in.	50	36	660	270	3180	38	43,500	1200
12-in.	45	42	850	310	2920	39	50,600	1200
12-in.	50	47	850	355	3080	40	56,600	1200
13-in.	45	82	1675	605	3080	49	96,800	1180

TABLES

TABLE XXIII.

BRITISH CASUALTIES AND HITS RECEIVED AT JUTLAND.

Hits by heavy shells only in case of armoured ships; hits by medium shells given in case of cruisers and destroyers.

	Killed.	Wound- ed.	Priso- ners.	Hits	Date Re- pairs com- pleted.	
Barham ...	26	37	...	6	July 4	Shell splinter in lower conning tower, belt armour hit and slightly driven in.
Valiant ...	0	1	...	?	No damage	
Warspite ...	14	16	...	13	July 20	3 shells through thin armour; 2 through after funnel; X turret hit, no damage.
Malaya ...	63	33	...	8	June 24	X-turret roof hit, no real damage; side armour 4 hits.
Lion ...	99	44	...	12	July 19	Q-turret roof plate pierced; main-mast pierced; side armour hits 2
Pr. Royal ...	22	78	...	9	July 15	X-turret roof hit and turret disabled; 9-in. side armour pierced; strutt of foremast hit; gun in Q-turret hit.
Queen Mary	1266	7	2	15?	Sunk	2 turrets hit.
Tiger ...	24	37	...	17	July 2	X-turret hit, not disabled; A-turret hit and cracked; Q-turret roof hit; 2 hits on thick side armour; 1 through thin armour.
Indefatigable	1017	0	2	5?	Sunk	A-turret and X-turret hit.
Invisible ...	1028	0	...	5?	Sunk	Q-turret and fore-turret hit.
Marlborough	2	0	...	t	Aug 2	Hit by a torpedo; stations 76-111 flooded; 39 ft. draught; slight damage to superstructure.
Colossus ...	0	5	...	2		
Defence ...	893	...	...	7?	Sunk	Fore turret hit.
Black Prince	857	...	...	15?	Sunk	
Warrior ...	71	27	...	15	Sunk after the battle.	
Southampton	36	40	...	18	June 20	5 hits stopped by thin armour; 3 pierced it.
Dublin ...	3	24	...	8	June 17	1 hit stopped by thin armour; 2 pierced it.
Chester ...	35	42	...	17	July 25	4 hits pierced thin armour; most hits on upper deck.
Calliope ...	10	9	...	5?		2 4-in. guns out of action.
Defender ...	1	2	...	1	June 23	Hit by 12-in. shell.
Tipperary ...	185	2	8	m	Sunk	
Broke ...	47	36	...	9	Aug. 31	
Porpoise ...	2	2	...	2	June 23	
Spithre ...	6	19	...	2	July 31	
Ardent ...	78	2	...	m	Sunk	
Fortune ...	67	1	...	m	Sunk	
Sparrowhawk	6	...	...	2?	Sunk after battle.	
Shark ...	86	2	...	mt	Sunk	
Acasta ...	6	1	...	2	Aug. 2	
Moorsom ...	...	1	...	1	June 17	
Turbulent ...	90	...	13	m	Sunk	
Castor ...	13	23	...	10		
Nessus ...	7	7	...	2?		
Onslaught ...	5	2	...	1		
Nestor ...	6	...	80	m	Sunk	
Nomad ...	8	...	72	t	Sunk	
Petard ...	9	6	...	6	June 27	
Onslow ...	2	3	...	5	Aug. 8	
	6097	510	177			

m=many hits. t=torpedoed.

Other unimportant hits from splinters of shells bursting short were received by Agincourt, Hercules, Marne.

There were also hits on Galatea and Falmouth (*Jutland Despatches*, 172, Fawcett and Hooper, 142).

TABLES

TABLE XXIV.

GERMAN CASUALTIES AND HITS RECEIVED AT JUTLAND

Hits by heavy shells only in case of armoured ships; hits by medium shells in case of cruisers and destroyers.

	Killed.	Wound- ed.	Hits.	Date Re- pairs completed.	
Lützow ...	115	50	24	Sunk	All heavy guns out of action at 7.45; B-turret hit; 8000 tons water.
Derfflinger ...	157	26	17	Oct. 15	2 turrets hit and out of action; great damage forward.
Seydlitz ...	98	55	21	Sept. 16	Forepart flooded by torpedo hit; 3 turrets hit and disabled.
Moltke ...	17	23	4	July 30	Damage small; one casemate destroyed; 300 tons water on board.
V. d. Tann ...	11	35	4	Aug. 2	2 turrets hit; 2 others broke down; steering compt. filled.
König ...	45	27	10	July 21	Serious damage to forecable; 1,600 tons water on board.
Gr. Kurfürst	15	10	8	July 16	2 hits on belt armour stopped; 1 hit through medium armour; bad leak.
Markgraf ...	11	13	5	July 20	Bad under-water hit; port engine disabled; armour hit but not pierced.
Kaiser ...	...	1	2		
Pr. Luitpold	...	11	1?		
Ostfriesland ...	1	10	M	July 26	No damage. 4 sections flooded; speed of 15 kts maintained.
Helgoland ...	...	...	1	June 16	Fragment of armour driven in bow.
Oldenburg ...	8	14	(1)		
Rheinland ...	10	20	(1)	June 10	
Nassau ...	11	16	(2)	July 10	
Westfalen ...	2	8	(1)	June 17	
Pommern ...	844	...	t	Sunk	
Schlesien ...	1	...	...
Schl. Holstein	3	3	1	June 24	
Pillau ...	4	19	1	July 17	
Elbing ...	4	12	...	Sunk	
Frankfurt ...	3	18	3	July 8	
Wiesbaden ...	589	...	m	Sunk	
Rostock ...	14	6	t	Sunk	
Stettin ...	8	28	2	July 20	
München ...	8	20	5	June 29	
Frauenlob ...	320	1	t	Sunk	
Hamburg ...	14	25	4	June 15	
G 40... ..	1	2	1	June 15	
S 32... ..	3	1	3	July 31	
B 98... ..	2	11	1	June 20	
V 48... ..	90	...	m	Sunk	
V 4	18	4	t	Sunk	
G 87... ..	1	5	1?		
S 86... ..	1	7	1?		
G 41... ..	...	5	1		
V 27... ..	...	3	1?	Sunk	
S 52... ..	1	1	1?		
S 51... ..	...	3	1	June 19	
S 36... ..	...	4	1?		
V 29... ..	33	4	1	Sunk	
S 35... ..	88	...	...	Sunk	
	2551	507	...		

M=mined. t=torpedoed. m=many hits. Figures in brackets are hits on armoured ships by medium projectiles (4-in. to 6-in.)

TABLES

TABLE XXV.—THE DARDANELLES FORTS IN 1915.

Calibre in inches .	14"	11"	10.2"	9.4"	8.2"	6" and 5.9"	4.7"	Howitzers and Mortars.	Small guns, etc.
Length in calibre .	35	22	22	35	35	35	22	8.2" 6" & 5.9"	4.7"
ENTRANCE FORTS.									
E Cape Helles	...	...	...	2	...	...	...	...	...
E Tekke Burnu	...	...	...	...	...	...	...	...	4
E Sedd el Bahr	...	2	2	2	...	...	...	...	4
A Orkanieh	...	...	...	2	...	...	...	...	...
A Kum Kaleh	...	2	2	2	1	2	...	...	...
Totals	...	4	4	4	1	2	...	4	4
INTERMEDIATE WORKS.									
A Dardanos	...	...	...	...	...	5	...	...	...
Other works on both shores	...	...	...	...	...	...	12	18	38
Total	...	...	...	...	...	5	12	18	38
INNER DEFENCES.									
E Yildiz	...	...	...	...	...	6	...	...	...
E Rumili Medjidieh	...	2	...	4	...	...	...	...	...
E Hamidieh II	2	...	...	...	...	...	...	...	...
E Namazieh	...	1	1	2	9	3	...	3	...
E Derna Burnu	...	...	...	6	...	...	...	...	...
A Hamidieh I	2	...	...	7	...	...	...	...	...
A Chemenlik	1	1	...	1	1	...	...	4	...
A Medjidieh Avan	...	...	...	...	...	...	6	...	...
A Medjidieh	...	...	4	2	2	3	...	...	...
A Anadolu	...	3	...	...	...	...	...	...	...
A Nagara	...	...	2	5	...	5	...	...	...
Totals	5	1	6	14	22	14	6	7	Many Small

E European side.

A Asiatic side.

Weight of shell—

14"	1400 lb. and 1150 lb.
11"	560 lb. armour piercing, 476 common shell.
10.2"	412 " " " 357 " "
9.4"	306 " " " 261 " "
8.2"	217 " " " 174 " "

TABLES

TABLE XXVI.
BATTLESHIPS ENGAGED MARCH 18, 1915,
AT DARDANELLES.

Name	Date of Launch.	Tons.	Speed kts.	Barbettes & Turrets.	Water line	Belt.	Medium Guns.	Armament.
				Inches.				
1st Class Battleship. <i>Queen Elizabeth</i> ...	1913	27,500	25	13	13	6		VIII 15" 42 cal, XII 6-in., XXIV small.
Battle Cruisers. <i>Inflexible</i> ...	1907	17,250	26	7	7	—		VIII 12" 45 cal, XVI 4-in.
2nd class Battleships <i>Agamemnon</i> } ... <i>Lord Nelson</i> } ...	1906	16,750	18½	12	12	7		IV 12" 45 cal., X 9.2-in. 50 cal., XXVII small.
3rd class Battleships <i>Triumph</i> } ... <i>Swiftsure</i> } ... <i>Cornwallis</i> } ... <i>Irresistible</i> } ... <i>Vengeance</i> } ... <i>Albion</i> } ... <i>Ocean</i> } ... <i>Canopus</i> } ... <i>Goliath</i> } ... <i>Prince George</i> } ... <i>Majestic</i> } ...	1903 1901 1897- 1898	11,810 14,000 12,950	20 18½ 18	7 10 8	7 7 6 5			IV 10" 45 cal., XIV 7.5-in. 50 cal., XXII small. IV 12" 40 cal., XII 6-in. 45 cal., XX small. IV 12" 35 cal., XII 6-in. 40 cal., XVIII small. IV 12" 35 cal., XII 6-in. 40 cal., XXX small.
FRENCH.								
<i>Suffren</i> ...	1899	12,520	18	12½	12	5		IV 12" 45 cal., X 6.4-in. 45 cal., VIII 4-in. 55 cal., XXII small.
<i>Gaulois</i> ...	1896	11,080	18	15½	15½	3		IV 12" 40 cal., X 5.5-in. 45 cal., VIII 4-in. 45 cal., XX small.
<i>Bouvet</i> † ...	1896	12,000	18	15½	14½	4		II 12" 40 cal., II 10.8" 40 cal., VIII 5.5-in., VIII 4-in., XX small.

† Sunk.

Weight of French shells—
12" 970 lb.
10.8" 560 "
6.4" 114 "
5.5" 77 "
4" 35 "

Weight of British shell in Table XIII.

TABLES

TABLE XXVII.

BRITISH NAVAL LOSSES IN THE GREAT WAR

Date	Name	How Sunk	Place	Cause or Enemy Vessel
BATTLESHIPS, 1ST CLASS, 2 :				
Oct. 27, 1914...	Audacious	Mine	N. coast of Ireland	Berlin, minelayer
July 9, 1917...	Vanguard	Internal Ex- plosion	Scapa	...
BATTLE CRUISERS, 3 :				
May 31, 1916...	Queen Mary	Gunfire	North Sea, battle of Jutland	German fleet
May 31, 1916...	Indefatigable	Gunfire		
May 31, 1916...	Invincible	Gunfire		
SECOND-CLASS BATTLESHIPS, 2 :				
Jan. 6, 1916...	K. Edward VII	Mine	Scotch coast	Möewe, mine-layer
Nov. 9, 1918...	Britannia	Torpedoed	Off Spain	German submarine
THIRD-CLASS BATTLESHIPS, 9 :				
Nov. 26, 1914...	Bulwark	Internal Ex- plosion	Sheerness	
Jan. 1, 1915...	Formidable	Torpedoed	Channel	German submarine
March 18, 1915...	Irresistible	Mine	Dardanelles	
March 18, 1915...	Ocean	Mine	Dardanelles	
May 13, 1915...	Goliath	Torpedoed	Dardanelles	Turkish destroyer
May 25, 1915...	Triumph	Torpedoed	Dardanelles	German submarine
May 27, 1915...	Majestic	Torpedoed	Dardanelles	German submarine
April 27, 1916...	Russell	Mine	Mediterranean	
Jan. 8, 1917...	Cornwallis	Torpedoed	Mediterranean	German submarine
ARMOURD CRUISERS, 12 :				
Sept. 22, 1914...	Högue	Torpedoed	North Sea	U 9
Sept. 22, 1914...	Aboukir			
Sept. 22, 1914...	Cressy			
Nov. 1, 1914...	Good Hope	Gunfire	Chilian coast	Von Spee's squadron
Nov. 1, 1914...	Monmouth			
Oct. 28, 1915...	Argyll			
Dec. 31, 1915...	Natal	Wrecked	Scotch coast	Accident
May 31, 1916...	Defence	Internal Ex- plosion	Cromarty	
June 1, 1916...	Black Prince	Gunfire	North Sea, battle of Jutland	German Fleet
June 1, 1916...	Warrior	Gunfire		
June 5, 1916...	Hampshire	Mine		
Oct. 2, 1917...	Drake	Torpedoed	Orkneys North Channel	German submarine German submarine
MONITORS, 6 :				
May 13, 1916...	M 30	Gunfire	Mediterranean	Turkish Forts
Nov. 11, 1917...	M 15	Torpedoed	Palestine Coast	Submarine
Jan. 20, 1918...	Raglan	Gunfire	Imbros	Goeben
Jan. 20, 1918...	M 28			
Sept. 16, 1918...	Glatton			
Oct. 20, 1918...	M 21	Internal Ex- plosion	Dover	
		Mine	Off Ostend	
CRUISERS, 7 :				
Aug. 6, 1914...	Amphion	Mine	North Sea	Königin Luise, mine- layer
Sept. 5, 1914...	Pathfinder	Torpedoed	North Sea	German submarine
Sept. 20, 1914...	Pegasus	Gunfire	Zanzibar	Königsberg
Oct. 15, 1914...	Hawke	Torpedoed	North Sea	German submarine
Feb. 11, 1916...	Arethusa	Mine	North Sea	
Aug. 19, 1916...	Falmouth	Torpedoed	North Sea	Submarine
Aug. 20, 1916...	Nottingham	Torpedoed	North Sea	Submarine

FLOTILLA LEADERS, 3 : Hoste, by collision ; Scott, submarined ; Tipperary, in action at Jutland.

DESTROYERS, 54 : Ardent, in action at Jutland ; Ariel, mined ; Arno, collision ; Attack, mined ; Bittern, collision ; Boxer, collision ; Cheerful, mined ; Comet, mined ; Contest, submarined ; Coquette, mined ; Derwent, mined ; Eden, collision ; Erne, wrecked ; Fairy, damaged by ramming U-boat ; Falcon, collision ; Flirt, in action ; Fortune, in action at Jutland ; Foyle, mined ; Gurka, mined ; Goldfinch, wrecked ; Itchen, submarined ; Kale, mined ; Laforey, mined ; Lasso, mined ; Lightning, mined ; Louis, wrecked ; Lynx, mined ; Maori, mined ; Marmion, collision ; Mary Rose, in action ; Medusa, collision ; Myrmidon, mined ; Narborough, wrecked ; Negro, collision ; Nessus, collision ; Nestor, Noniad, in action at Jutland ; North Star, in action ; Nubian, action, half lost ; Opal, wrecked ; Paragon, in action ; Partridge, in action ; Pheasant, mined ; Phoenix, submarined ; Pincher, wrecked ; Ragoon, wrecked ; Recruit, submarined ; Recruit II, mined ; Setter, collision ; Shark, in action at Jutland ; Simoon, in action ; Sparrowhawk, in action at Jutland ; Staunton, submarined ; Strongbow, in action ; Success, wrecked ;

TABLES

Surprise, mined; Tornado, mined; Torrent, mined; Turbulent, in action at Jutland; Ulleswater, submarined; Ulysses, collision; Vehement, mined; Velox, mined; Wolverine, collision; Zulu, action, half lost.

TORPEDO BOATS, 11: No. 064, wrecked; No. 046, mined; No. 9, collision; No. 10, subm ned; No. 11, submarined; No. 12, submarined; No. 13, collision; No. 24, wrecked; No. 90, wrecked; No. 96, collision; No. 117, collision.

SUBMARINES, 54: AE1, unknown; AE2, action; C3, expended at Zeebrugge as mineship; C26 blown up by crew; C27, blown up by crew; C29, mined; C31, C32, C33, unknown; C34, submarined; C35, blown up by crew; D2, D3, unknown; D5, mined; D6, unknown; E1, blown up by crew; E3, E5, unknown; E6, mined; E7, action; E8, E9, blown up by crew; E10, unknown; E13, interned; E14, in action; E15, wrecked; E16, unknown; E17, wrecked; E18, in action; E19, blown up by crew; E20, in action; E22, unknown; E24, E26, E30, E34, E36, E37, E47, E49, E50, G7, G8, unknown; G9, accident; G11, wrecked; H3, unknown; H5, collision; H6, wrecked; H10, unknown; J6, accident; K1, K4, K17, collision; L10, unknown. (Unknown means that the cause of loss is not definitely known.)

SCHOOPS, 18: Alyssum, mined; Anchusa, submarined; Arabis, in action; Arbutus, submarined; Aster, mined; Begonia, unknown; Bergamot, submarined; Candytuft, submarined; Cowslip, submarined; Gaillardia, mined; Genista, submarined; Lavender, submarined; Mignonette, mined; Nasturtium, mined; Primula, Rhododendron, Salvia, Tulip, submarined.

TORPEDO-GUNBOATS, 5: Hazard, collision; Jason, mined; Niger, submarined; Seagull, collision; Speedy, mined.

AIRCRAFT SHIPS, 3: Hermes, submarined; Ben-my-Chree, in action; Campania, collision.

PATROL BOATS, 2: P 12, collision; P 26, mined.

MINE-LAYERS, 2: Princess Irene, internal explosion; Ariadne, submarined.

GERMAN NAVAL LOSSES IN LARGE SURFACE SHIPS

(Omitting ships surrendered)

Date	Name	How Sunk	Place	Cause or Enemy Vessel
BATTLE CRUISER, 1:				
June 1, 1916...	Lützow	Gunfire	Battle of Jutland	British Fleet
THIRD-CLASS BATTLESHIP, 1:				
June 1, 1916...	Pommern	Torpedoed	Battle of Jutland	British Fleet
ARMoured CRUISERS, 6:				
Nov. 4, 1914...	Yorck	Mine	North Sea	—
Nov. 17, 1914...	Fr. Karl	Mine	Baltic	—
Dec. 8, 1914...	Scharnhorst	Gunfire	Falkland Islands	Sturdee's fleet
Dec. 8, 1914...	Gneisenau	Gunfire	Falkland Islands	Sturdee's fleet
Jan. 24, 1915...	Blücher	Gunfire	North Sea	Beatty's fleet
Oct. 23, 1915...	Pr. Adalbert	Torpedoed	Baltic	British submarine
LIGHT CRUISERS, 18:				
Aug. 26, 1914...	Magdeburg	Wrecked	Baltic	—
Aug. 28, 1914...	Mainz	Gunfire	Heligoland	British fleet
Aug. 28, 1914...	Köln	Gunfire	Heligoland	British fleet
Aug. 28, 1914...	Ariadne	Gunfire	Heligoland	British fleet
Sept. 13, 1914...	Hela	Torpedoed	North Sea	E 9
Nov. 9, 1914...	Emden	Gunfire	Cocos Isles	Sydney
Nov. 4, 1914...	Karlsruhe	Explosion	West Indies	—
Dec. 8, 1914...	Nürnberg	Gunfire	Falkland Islands	Sturdee's fleet
Dec. 8, 1914...	Leipzig	Gunfire	Falkland Islands	Sturdee's fleet
March 14, 1915...	Dresden	Sunk	Mas a Fuera	British cruisers
July 11, 1915...	Königsberg	Burnt	Rufiji River	British monitors
Nov. 7, 1915...	Undine	Torpedoed	Baltic	British submarine
Dec. 17, 1915...	Bremen	Torpedoed	Baltic	British submarine
May 31, 1916...	Frauenlob	Torpedoed	Battle of Jutland	British fleet
June 1, 1916...	Wiesbaden	Gunfire	Battle of Jutland	British fleet
June 1, 1916...	Elbing			
June 1, 1916...	Rostock			
Jan. 25, 1918...	Breslau	Mine	Off Dardanelles	British

DESTROYERS, 69; TORPEDO BOATS, 53; SUBMARINES, 199.

MINE-LAYERS: Albatross and 30 others.

OLD GUNBOATS, 11: Möwe, Tsingtau, Vaterland, Cormoran, Jaguar, Luchs, Iltis, Tiger, Eber Geier, Seeadler.

AUXILIARIES: Königin Luise, Südmark, K. Wilhelm der Grosse, Brock, Bethania, Spreewald, Cap Trafalgar, Itolo, Rhios, Soden, Grecia, Markomannia, Komet, Ruchin, Eitel Friedrich, K. Wilhelm, Macedonia, Meteor, Greif, and many others.

TABLES

ARMOURD SHIPS LOST BY OTHER POWERS THAN ENGLAND AND GERMANY ALLIES. IN THE GREAT WAR

Date.	Name.	Place.	How Sunk.
FRANCE			
BATTLESHIPS, 2ND AND 3RD CLASS.			
March 18, 1915 ...	Bouvet	Dardanelles	Mine or gunfire
Nov. 26, 1916 ...	Suffren	Bay of Biscay	Submarine
Dec. 27, 1916 ...	Gaulois	Mediterranean	Submarine
March 19, 1917 ...	Danton	Mediterranean	Submarine
ARMOURD CRUISERS :			
April 26, 1915 ...	L. Gambetta	Mediterranean	Submarine
Feb. 8, 1916 ...	Charner	Syria	Submarine
June 27, 1917 ...	Kléber	Off Brest	Mined
Aug. 7, 1918 ...	Dupetit Thouars	Atlantic	Mined
Also lost 1 cruiser, 3 gunboats, 11 destroyers, 7 torpedo boats, 16 submarines, 4 armed merchant cruisers.			

RUSSIA			
BATTLESHIPS, 1ST CLASS :			
Oct. 20, 1916 ...	Empress Maria	Sevastopol	Internal explosion
June 18, 1918 ...	Catherine II	Black Sea	Destroyed to escape capture
3RD CLASS :			
Jan. 4, 1917 ...	Peresviet	Egypt	Mined
Oct. 16, 1917 ...	Slava	Gulf of Riga	Gunfire
ARMOURD CRUISER :			
Oct. 11, 1914 ...	Pallada	Baltic	Submarine
Also lost 2 cruisers, 2 gunboats, 4 mine-layers, 21 destroyers, 12 submarines.			

JAPAN			
BATTLESHIP, 1ST CLASS :			
July 12, 1918 ...	Kawachi	Japan	Internal explosion
ARMOURD CRUISER :			
Jan. 14, 1917 ...	Tsukuba	Yokosuka	Internal explosion
Also lost 3 light cruisers, 2 destroyers, 1 torpedo boat.			

ITALY			
BATTLESHIP, 1ST CLASS :			
Aug. 2, 1916 ...	L. da Vinci	Taranto	Internal explosion
BATTLESHIPS, 2ND CLASS :			
Sept. 27, 1915 ...	Ben. Brin	Brindisi	Internal explosion
Dec. 11, 1916 ...	Reg. Margherita	Taranto	Mine
ARMOURD CRUISERS :			
July 7, 1915 ...	Amalfi	Adriatic	Submarine
July 18, 1915 ...	Garibaldi	Adriatic	Submarine
Also lost 1 mine-layer, 1 monitor, 2 auxiliary cruisers, 1 flotilla leader, 8 destroyers, 12 torpedo boats, 1 gunboat.			

UNITED STATES			
ARMOURD CRUISER :			
July 19, 1918 ...	San Diego	Off New York	Mine
Also lost 2 destroyers, 1 gunboat, 1 submarine.			

AUSTRIA			
1ST CLASS BATTLESHIPS :			
June 10, 1918 ...	Szent Istvan	Adriatic	Torpedoed
Nov. 1, 1918 ...	Viribus Unis	Pola	Special mine
3RD CLASS BATTLESHIP :			
Dec. 9, 1917 ...	Wien	Trieste	Torpedoed
Also lost 2 light cruisers, 5 destroyers, 4 torpedo boats, 9 submarines, 3 river monitors.			

TURKEY			
OLD BATTLESHIPS :			
Dec. 13, 1914 ...	Messudieh	Dardanelles	Submarine
Aug. 8, 1915 ...	Barbarossa	Dardanelles	Submarine
Also lost 1 light cruiser, 4 gunboats, 3 destroyers, 5 torpedo boats.			

TABLES

TABLE XXVIII.—LEADING GERMAN SUBMARINE TYPES

U Number.	Completed	Displacement, Metric Tons,		Torpedo Tubes	Torpedoes.	Mines.	Guns.	Surface Endurance, Miles.	H.P. Surface.	Crew
		surface	submerged							
5-12	1911	500	620	IV	VI 18-in.	...	I 4-pr.	3400	900	28
31-41	1915	680	879	IV	VI 18-in.	...	I 4.1-in.	4400	1850	39
71-80	1915	750	830	II	IV 20-in.	36	I 4.1-in.	7630	900	39
93-98	1917	850	1000	VI	XVI 20-in.	...	I 4.1-in. I 3.4-in.	3810	2400	39
117-121	1918	1160	1510	IV	XXIV 20-in.	42	I 6-in.	6080	2400	40
139-141	1918	1930	2480	IV	XIX 20-in.	...	II 6-in.	4000	3500	83
151-157	1918	1510	1870	II	XVIII 20-in.	...	II 6-in. II 3.4-in.	13,130	800	76
B CLASS										
I-17	1915	127	142	II	II 18-in.	...	I machine	1650	60	14
18-47	1915	260	290	II	IV 20-in.	...	I 4-pr.	5700	280	23
88-132	1918	516	640	V	X 20-in.	...	I 4.1-in.	3500	1100	34
C CLASS										
I-15	1915	168	183	...	...	12	I machine	850	90	14
34-48	1916	420	500	III	VII 20-in.	18	I 3.4-in.	7100	500	26
80-116	1918	480	560	III	VII 20-in.	14	I 4.1-in.	8200	600	32

'

TABLE XXIX.—GERMAN U BOAT STRENGTH

German U-Boat Strength.	roth of the month. Total Complete.	New Boats completed	Old Boats lost.	Old Boats interned.
Aug., 1914	20	3	2	...
Sept., 1914	24	...	...	...
Oct., 1914	27	...	...	...
Nov., 1914	28	...	...	...
Dec., 1914	28	...	...	...
Jan., 1915	27	2	2	...
Feb., 1915	27	4	...	...
Mar., 1915	27	...	...	...
Apr., 1915	26	...	...	...
May., 1915	35	...	...	...
June., 1915	40	...	...	...
July., 1915	44	...	...	...
Aug., 1915	45	...	...	...
Sept., 1915	46	...	...	...
Oct., 1915	44	...	...	...
Nov., 1915	42	...	...	...
Dec., 1915	44	...	...	...
Jan., 1916	41	3	...	...
Feb., 1916	41	...	...	...
Mar., 1916	47	...	...	...
Apr., 1916	52	...	...	...
May., 1916	58	...	...	...
June., 1916	65	...	...	...
July., 1916	72	...	...	...
Aug., 1916	74	...	...	...
Sept., 1916	80	...	...	...
Oct., 1916	87	...	...	...
Nov., 1916	93	...	...	...
Dec., 1916	97	...	...	...
Jan., 1917	103	...	...	...
Feb., 1917	111	...	...	...
Mar., 1917	128	...	...	I
Apr., 1917	127	...	...	...
May, 1917	130	...	...	...
June, 1917	132	...	...	...
July, 1917	130	...	...	I
Aug., 1917	128	...	...	...
Sept., 1917	139	...	...	...
Oct., 1917	140	...	...	...
Nov., 1917	137	...	...	...
Dec., 1917	134	...	...	...
Jan., 1918	132	...	...	...
Feb., 1918	129	...	...	...
Mar., 1918	127	...	...	I
Apr., 1918	125	...	...	...
May, 1918	125	...	...	2
June, 1918	112	...	...	...
July, 1918	121	...	...	...
Aug., 1918	124	...	...	...
Sept., 1918	128	...	...	...
Oct., 1918	121	...	...	...
Nov., 1918	...	...	...	I

Destroyed at their bases in German retreat ...

185
I4
199

This table is prepared from figures given in Michelsen; it will be noted that the figures do not exactly agree, but they are the most accurate as yet available.

TABLES

TABLE XXX.—LOSSES IN GREAT NAVAL BATTLES.

Battle.	Nation.	Total Men Engaged.	Killed and Drowned	Wounded	Prisoners.	Total Loss.	Percentage of casualties to forces.	Ships in Line.	
								Sunk.	Capt'd
Jutland ...	British	60,000 ¹	6097	510	177	6784	11	3	0
Dogger Bank	Germans	45,000 ¹	2551	507	none	3058	6.8	2	0
	British	11,500	14	29	none	43	.04	1	0
Falklands ...	Germans	7,271	954	80	189	1233	16	0	0
	British	4,500 ¹	6	19	none	25	.02	0	0
Tsushima ...	Germans	2,700 ¹	2110	?	212	2322	86	2	0
	Japanese	17,000 ¹	117	583	none	700	4	0	0
Aug. 10, 1904	Russians	13,500 ¹	4830	unknown	5917	10,747	79	8	0
	Japanese	10,030 ¹	69	131	none	200	2	4	0
Santiago ...	Russians	6,500 ¹	74	394	none	468	7	0	0
	U.S.A.	3,136	1	10	none	11	.03	0	0
Yalu	Spaniards	2,222	323	201	1500	2024	91	4	0
	Japanese	3,870	90	208	none	298	8	0	0
Lissa ...	Chinese	2,500	718	122	none	840	33	4	0
	Austrians	7,871	38	138	none	176	2	0	0
Trafalgar ...	Italian	10,880	620	40	none	640	6	2	0
	British	16,820	449	1241	none	1090	10	0	0
Nile ...	French	21,580	3373 ²	1155 ³	?	4528 ^{2,4}	?	1	17
	British	7,980	218	678	none	896	11	0	0
Camperdown	French	9,820	Estmt ¹	d at 3,000	3000	29 ⁴	2	9	0
	British	8,220	203	622	none	825	10	0	0
June 1 1794	Dutch	7,150	540	620	...	1160 ⁴	16 ⁴	0	9
	British	17,240	290	858	none	1148	6	0	0
	French	19,760		5000 ³	...	5000 ³	25 ⁴	1	6

¹ Estimate : allowing for extra strength of war crews.

² For French alone, not including Spanish loss, which may have been 3,000 more.

³ Estimate : does not include prisoners. ⁴ Does not include prisoners.

Figures for certain battles from Hodge : "Losses in Naval Wars."—*Journal Royal Statistical Society*, Vol. XVIII. For the early battles before steam slightly wounded were not included, and probably one fourth should be added to the percentages to give an accurate comparison.

ERRATA

VOL. I

Page 254: Reference to the Note 1 should be inserted after the figure "313" in the table beginning with "Mikasa."

Page 255: "Takachih" should read "Takachiho" in the table at head of page.

In Plan XIII, page 166, Sakhalin should be shaded as Russian, not as Japanese.

In Plan XX, page 258, read "Gromky" for "Gronky."

In Plan XX, page 258, "Japanese Cruisers. May 20 dawn," should read "Japanese Cruisers. May 28 dawn."

In Plan XXII, page 272, Taku: "Koviets" should read "Korietz."

VOL. II

In Plan XXIV, page 40, "Papacete" should be "Papeete."

In Plan XXVII, page 74, "Keppez" should be "Kephez."

In Plan XLII, page 270, "Dardana" should be "Dardanos."

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